

Chapter 1

Dissecting the AP Biology Exam

In This Chapter

- ▶ Understanding why you take this exam
- ▶ Breaking down the exam into all its parts
- ▶ Guessing or not
- ▶ Getting the skinny on the scores
- ▶ Packing your bags: What to take and not take to the test
- ▶ Preparing for unusual circumstances: What to do if you need special assistance

You really didn't know what the insides of the frog looked like before you opened it up, did you? Well, consider this first chapter the dissection of the AP Exam. As we slice and cut through the test, you will begin to get familiar with why you should (or shouldn't) take this test, the test's structure, how you will be scored, what's allowed on test day and what to do if you require special assistance. Many students are intimidated by the AP tests, but the Wizard of Oz was also scary before the curtain flew open! So sit back, relax, get your scalpel out, and open this thing up!



We do a lot of talking in this chapter about the AP Exam, but if you're taking AP Biology now or getting ready to, keep in mind that while this book can be a great support throughout your course, the AP Exam is the end game, so you need to know this info, too!

Proving Your College Prowess

Taking the AP test is basically telling those good folks at any college that you can already think and perform on the college level. Although taking an AP Biology course is not required to take the AP test (although we highly recommend you do), your high score on the test (see the skinny on the scoring information below) signifies that you understand advanced material and already possess what it takes to be successful in college. Go you! By getting a high score, you also have the opportunity to receive credit or advanced standing at most universities around the country. You should take this test if Biology is "your thing" and you want the world to know.

If you received poor grades in Biology in high school and could care less about what's inside a cell, you might want to consider spending your time on a subject you truly enjoy. Those smart AP creators have AP tests in a variety of different subjects, so if you're not sure about your dedication to this particular test, you might want to visit their Web site and glance at the other subjects offered. If you're just taking an AP Biology class and don't plan on taking the exam at the end, then that's cool too. This book will definitely help you succeed in an AP Biology class.

Because you bought this book, however, we will assume you are a natural Biologist and that after studying this book you will bust out of your high school body and become your true self: the college student that you were meant to be!

Getting to the Guts of the Exam

The AP Biology Exam takes three hours and includes two parts: an 80-minute, 100-question multiple choice section; a 100-minute writing period broken down into a 10-minute reading period, and a 90-minute four-question, free-response section. After you complete the multiple choice section you get a short break.



You can't return to the multiple choice section after you hand it in, so make certain you are satisfied before you stretch your legs!

The multiple-choice questions

We have a feeling that the AP bigwigs couldn't agree on what types of problems and questions to include in the multiple choice section. As a result, they just decided to throw in everything. The multiple choice questions that you will encounter cover a broad range of topics. You can expect to answer basic factual information as well as heavy-duty, thought-provoking problems. You have basically 48 seconds per question on the multiple-choice section, and to get a great score on the exam, you need to correctly answer around 60 questions or more (more information on tackling these types of questions in Chapter 2).

The free-response questions

The second section of the exam is the writing section. Of 100 minutes you read for 10 minutes, after which you get 90 minutes to complete an essay period. You're given four broad essay questions. On average, one essay covers material relating to molecules and cells, one essay covers heredity and evolution, and — lucky you — you get two essays covering organisms and populations. Remember that at least one of the essays will ask you to analyze experimental data and perhaps design an experiment. So pay close attention when we talk about the labs in each chapter (more information on tackling these types of problems in Chapter 2).

Ticking through the Topics Covered

Before writing the AP exam, a few Biology geniuses studied the Biology curricula of many of the nation's best colleges. They came away from the study with a clear understanding of which high-level concepts were being taught to Biology college students around the country. From their research they decided that the AP exam should cover three main areas. But because you deserve to know everything, we break these three areas down even further, outlining every subheading in the test, as well as the percentage of the test attributed to it:

✓ **Molecules and Cells** (25 percent of test):

- **Chemistry of Life:** Water, organic molecules in organisms, free energy changes, enzymes (7 percent)
- **Cells:** Prokaryotic and eukaryotic cells, membranes, subcellular organization (10 percent)
- **Cellular Energetics:** Coupled reactions, fermentation, and cellular respiration (8 percent)

✓ **Heredity and Evolution** (25 percent of test):

- **Heredity:** Meiosis and gametogenesis, eukaryotic chromosomes, inheritance patterns (8 percent)



- **Molecular Genetics:** RNA and DNA structure and function, gene regulation, mutation, viral structure and replication, nucleic acid technology and applications (9 percent)

- **Evolutionary Biology:** Early evolution of life, evidence for evolution, mechanisms of evolution (8 percent)

✓ **Organisms and Populations** (50 percent of test): As you can see, Organisms and Populations covers half the test. So, when studying, you know where to place your attention.

- **Diversity of Organisms:** Evolutionary patterns, survey of the diversity of life, phylogenetic classification, evolutionary relationships (8 percent)
- **Structure and Function of Plants and Animals:** Reproduction, growth and development, structural, physiological and behavioral adaptations (32 percent)

Notice that 32 percent of the test is Structure and Function of Plants and Animals. That's a big chunk, so when studying later, make sure to pay careful attention to this section.



- **Ecology:** Population dynamics, communities and ecosystems, global issues (10 percent)

Trying to Decide: To Guess or Not to Guess

Here's our advice on guessing: Guess and don't guess. Not the answer you wanted? Let us explain. The test folks don't take away points for answers left blank, but they do remove a portion of points for wrong answers (we get into more of the scoring of the test in the section, "Getting the Skinny on Scoring"). If you can whittle away the obvious wrong answers and make a really good *educated* guess, then we say go for it. Never, we repeat, never answer a question if you have absolutely no idea where to begin. You don't get dinged for leaving a blank answer, but you do suffer the point loss for the wrong answer. If you have *some* knowledge of the question and can eliminate two to three obvious wrong answers, informed guessing is definitely to your advantage.

Getting the Skinny on Scoring

After all is said and done, you end up with a final composite score between 1 and 5. Those smart AP folks did a lot of researching to figure out how to score you. They periodically compare the performance of AP students with that of college students tested on the same material. Basically, a grade of 5 on the AP test is comparable to a college student earning an A in their college level Biology course. A grade of 4 on the AP test is like receiving a B in a college level class, and so on. An AP score of 3 or higher would qualify you for college credit because it would be the equivalent of earning a middle C or higher if you were to take that class in college. The College Board likes to put it this way:

- 5: Extremely well qualified
- 4: Well qualified
- 3: Qualified
- 2: Possibly qualified
- 1: No recommendation

Before you receive a composite score, however, a lot of calculating goes on to get that number. Take a look at the breakdown in the following sections.

Tabulating the multiple-choice section

Chapter 2 discusses the multiple choice and free response questions at length. This section is all about the final numbers. Once you know the scoring and then get the skinny on how to tackle the questions in Chapter 2, we feel strongly that you will score high and feel great!

The multiple choice section is scored by a computer. The computer counts the amount of wrong answers and subtracts .25 points for each wrong answer from the amount of right answers. Any question that you didn't answer is counted as 0. So basically, the formula for scoring this section is:

$$\text{Multiple-choice score} = \text{Number of correct answers} - (\text{number of wrong answers} \times .25)$$

Adding up the free-response section

Your essays are read by top-secret, highly trained professionals — think “secret service” of the College Board. No one knows the identity of these professionals. Isn't this getting exciting? Your four essays are read by four different secret people — that's four, highly trained, hidden, underground readers just for you! Each scorer is trained to score just *one* essay question on the exam. They truly become experts in that *one* question. Each essay is scored on a scale from 1 to 10. The secretive AP leaders assure us that they have ample check-double-check systems in place to ensure that all essays are scored fairly.

Reaching the composite score

Okay, after you have two sets of scores (one score for the multiple-choice section and one score for the free-response section) they're put together to get your composite score and your final number. The highest composite score for the AP Biology test is 150. The multiple-choice score makes up 60 percent, or 90 points, of the 150 total. The free-response section is 40 percent, or 60 points, of the 150 total. There is no definitive composite score range that is consistent from year to year or even from subject to subject. So we can't give the exact formula used to determine your score. But we *can* take a look at a prior year's range of scores and get a hint as to where you might find your score.

In a recent year composite scores between

108 to 150 received a 5

93 to 107 received a 4

72 to 92 received a 3

43 to 71 received a 2

0 to 42 received a 0

This range changes every year. Why, you ask? Well, the answer the College Board gave to us is more difficult to interpret than the essay section of the test, so the fact remains: The range changes every year, and that's that!

Packing Your Tools for the Test

When packing to go on vacation, you don't want to forget your favorite piece of clothing or that hair product you can't live without. Packing for the test is the same thing, albeit not as fun. Although all of the following aren't mandatory to bring to the test, we highly encourage you bring all of them. It's always better to pack more, not less. Here we list what's important to make sure you bring with you to the test site:

- ✓ **Pencils with erasers:** Pencils with erasers are best for the multiple-choice test.
- ✓ **Black pens:** Black is a better choice because it is a bolder color.
- ✓ **Your social security number:** This identifies you.
- ✓ **Photo ID:** Take this in case they think you paid your best friend to take the test for you!
- ✓ **A watch:** You need to pay close attention to the time.
- ✓ **Snacks and drinks:** Quiet snacks are better than loud snacks. Go with soft snacks that won't disrupt others, like chewy granola bars. Water is a better choice than popping a loud soda.
- ✓ **Your knowledge:** 'Nuff said.
- ✓ **Appropriate clothing:** Bring a light jacket in case there's an arctic freeze in the test center.
- ✓ **Something to wipe your nose if you should drip:** You don't want to be leaving every ten minutes, and nobody wants to be distracted by sleeve wipes or sniffing. Bring tissues!

We said over-packing for a vacation is a good thing, but remember that there are usually luggage restrictions on planes. You can't bring *everything*. The following items are definite no nos. You will even be thrown out of a test site for bringing some of these. So, leave 'em home, or in your car. Here we list what not to bring to the test:

- ✓ **Scratch paper:** The good folks at AP thought of that already. You get what you need at the test center.
- ✓ **Notes, books, dictionaries, highlighters, cheat sheets:** Keep that all at home.
- ✓ **Electronic devices like cell phones, beepers, mp3 players:** Sorry, but you can't take the test while listening to The Black Eyed Peas.
- ✓ **Your best friend to take the test for you:** They frown on that.
- ✓ **Computers or calculators:** Nope, sorry.
- ✓ **Your parents for moral support:** Leave the folks at home.

Requesting Special Modifications

Not everyone takes the AP test under the same conditions. You may have a special circumstance that can allow you to change the date of the test or the way you take the exam. Here is a brief list of special circumstances and how they affect your AP test:

- ✓ **Learning disabilities:** If you have a diagnosed learning disability, you may be able to get special accommodations. You may have extended time, large print, a reader, frequent breaks, among other things, but you must specifically request this on your application form. You should make sure that your school has a SSD (Services for Students with Disabilities) Coordinator's Form on file with the College Board. You must fill out this form and send it to the College Board. Allow seven weeks for the pros at College Board to review your request. Please note that in order to get special testing, you must have been formally diagnosed with a learning disability by a professional and must have a current, individualized plan at school. In most cases, the evaluation and diagnostic testing should have taken place within five years of the request for accommodations. You must also describe the comprehensive testing and techniques used to arrive at the diagnosis, including test results with subtest scores. Your best bet is to log onto the College Board Web site to see all the up-to-the-minute requirements for accommodations.
- ✓ **Physical disabilities:** If you have a physical disability, you may be allowed to take a test in a special format — in Braille, large print, or on an audiocassette or CD. Follow the same instructions detailed above and contact the College Board for more information.
- ✓ **Religious obligations:** If your religion prohibits you from taking a test on a specific day, you may test on an alternate date. Again, the College Board folks can guide you in the right direction for alternate dates.
- ✓ **Military duty:** If you're an active-duty military person, you don't need to complete the normal registration form. Instead, ask your Educational Services Officer about testing through DANTES (Defense Activity for Nontraditional Educational Support).