

About Your Study Plan

This Study Plan comprises the full spectrum of materials and resources available to a candidate. We encourage you to use the recommended resources to target preparation to your needs and goals.

There will be hyperlinks throughout this document. Please make sure that you visit the relevant pages to access all of the resources.

Your commitment to great teaching begins here. Your efforts will not only help you pass the test, but will also prepare you to become a successful teacher.

How to study:

ABCTE is committed to making sure you are the best possible teacher.

We will provide you with study tips to get ready for the exam and both the content and resources to review this material. It is your job to commit to preparing and stay dedicated while studying.

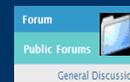
Think of the Snapshot below as an overview for what you need to know. For more detail in each topic, review the exam [standards](#). The ABCTE exams are based on this blueprint, so consider this a syllabus for what you want to study.

ABCTE Teacher Forums:

Become a part of the ABCTE community by participating in our Teacher Forums today!

You can discuss the program, ask questions, and learn what other candidates have done to succeed in their classrooms.

<http://www.abcte.org/forums>



Biology Exam Snapshot

Time Allowed	240 minutes	
Format	Multiple-choice	
Number of Questions	145	
On-Screen Exhibits (available as relevant)	Standard calculator; Periodic Table	
Passing Score	Proficient: 266 Distinguished: 311	(The number of questions answered correctly is converted to a scaled score ranging from 0 to 500.)
Exam Summary	Content Domains	Approximate Percentage of Examination
	General Science Knowledge	20%
	Scientific Investigation	15%
	Biochemical Basis of Life	6%
	Cell Biology and Microbiology	10%
	Classical Genetics	4%
	Molecular Biology	11%
	Evolution	7%
	Comparative Physiology	6%
	Human Physiology	9%
	Plant Biology and Physiology	6%
Ecology	6%	

About This Exam The American Board for Certification of Teacher Excellence believes that highly skilled biology teachers should possess a comprehensive body of scientific knowledge that is research-based and promotes student achievement. The biology exam is a rigorous assessment of a candidate's knowledge and application of general biology. The topics assessed are characteristically covered in introductory college level biology courses, although some more advanced questions are included, as teachers must hold a more sophisticated understanding of biology content than that presented to their students.

How to use ABCTE Practice Tests

If you have chosen to use our practice tests, you may have already used the quizzes to get a better idea of where your strengths and weaknesses are. There are two full-length exams that we would suggest you use in *testing mode* as a mid-term and final to work on your timing and endurance. You can use them again in *explore mode* to identify distractors.

Name:

Date:

The Study Plan:

Your study plan includes direction on how to use ABCTE's resources. We also include recommended resources to aid in your mastery. The full description of these can always be found at: <http://www.abcte.org/teach/biology-standards>. You should also rate these resources whenever possible.

This plan was designed for a 9 month period (4 months for Professional Teaching Knowledge (PTK); 4 months for the subject matter; 2 weeks to take each test) in which most people are able to complete the program. Many have completed the program in a shorter amount of time.

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Basic Science <input type="checkbox"/> Domain 1: Scientific Investigation <input type="checkbox"/> Domain 2: Biology <input type="checkbox"/> Domain 3: Chemistry <input type="checkbox"/> Domain 4: Earth Science <input type="checkbox"/> Domain 5: Physics	<input type="checkbox"/> Review the specific Biology standard http://www.abcte.org/teach/biology-standards The corresponding sessions can be found in your ABCTE Refresher Workshops at: http://www.abcte.org/courses/biology/index.html Basic Science Core <input type="checkbox"/> Scientific Investigation, Part I <input type="checkbox"/> Scientific Investigation, Part II <input type="checkbox"/> Basic Chemistry, Part I <input type="checkbox"/> Basic Chemistry, Part II <input type="checkbox"/> Earth Science <input type="checkbox"/> Physics <input type="checkbox"/> Biology Basics <input type="checkbox"/> Reproduction <input type="checkbox"/> Mendelian Genetics <input type="checkbox"/> Fossils, Evolution & Diversity <input type="checkbox"/> Human Body Systems <input type="checkbox"/> Ecosystems	Web Resources <input type="checkbox"/> MIT OpenCourseWare: Introductory Biology <input type="checkbox"/> What is Life: A Lifescience Educational Forum <input type="checkbox"/> Easyphysics.net <input type="checkbox"/> WebElements Books <input type="checkbox"/> The Complete Idiot's Guide to Biology <input type="checkbox"/> Foundations of Earth Science Other Media <input type="checkbox"/> These and other resources can be found at: http://www.abcte.org/teach/exam-preparation/Biology	{Time}

Your Notes:

Note: The resources recommended outside of the ABCTE program are often freely accessible online or can be found in your library. To ease your search we have hyperlinked them.

Name:

Date:

Study Tip:

One effective way of using the practice quizzes is to look at the incorrect answer choices before looking at the correct explanation to see if you can understand why those options are wrong. If you can understand how a test maker uses distractors, you will be able to eliminate wrong answer choices faster on test day.

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Framework (Standards) Biology <input type="checkbox"/> Domain 1: Biochemical Basis of Life	<input type="checkbox"/> Review the specific Biology standard http://www.abcte.org/teach/biology-standards The corresponding sessions can be found in your ABCTE Refresher Workshops at: http://www.abcte.org/courses/biology/index.html Biochemical Basis of Life <input type="checkbox"/> Biochemical Basis of Life <input type="checkbox"/> Genetic Engineering Lipids <input type="checkbox"/> Proteins <input type="checkbox"/> Nucleotides & Nucleic Acids	Web Resources <input type="checkbox"/> What is Life: A Lifescience Educational Forum Books <input type="checkbox"/> A Dictionary of Biology (Oxford Paperback Reference) <input type="checkbox"/> Schaum's Outline of Biochemistry <input type="checkbox"/> Biochemistry: Board Review Series Other Media <input type="checkbox"/> These and other resources can be found at: http://www.abcte.org/teach/exam-preparation/Biology	{Time}

Your Notes:

"I can give children the inspiration and encouragement to confront their own challenges, surpass negativity and persevere....Without this program, I wouldn't have had the opportunity to pursue teaching."

-Traci Brown, ABCTE Teacher, FL

Testing on the Computer:

This may be your first time taking a test on a computer. On average, people read 20% slower on a screen vs. paper. Because of this and other issues, practice as much as you can on the computer to become comfortable working in that environment.

Familiarity with the test and its standards will go a long way towards your ABCTE success.

The online practice tests are great practice to get a feel for the testing environment.

Area of Study	Required ABCTE Resource	Recommended Resource	Timeline
<input type="checkbox"/> Framework (Standards) Biology <input type="checkbox"/> Domain 2: Cell Biology & Microbiology	<input type="checkbox"/> Review the specific Biology standard http://www.abcte.org/teach/biology-standards The following sessions can be found in your ABCTE Refresher Workshops at: http://www.abcte.org/courses/biology/index.html Cell Biology and Microbiology <input type="checkbox"/> Discovering Cells <input type="checkbox"/> Animal Cells: Structure and Function <input type="checkbox"/> Plant Cells <input type="checkbox"/> Prokaryotes <input type="checkbox"/> Eukaryotes <input type="checkbox"/> Protista <input type="checkbox"/> Viruses <input type="checkbox"/> Molds <input type="checkbox"/> Fungi	Web Resources <input type="checkbox"/> Cell and Molecular Biology Online Books <input type="checkbox"/> Dictionary of Cell Biology <input type="checkbox"/> Microbiology <input type="checkbox"/> The Way of the Cell: Molecules, Organisms and the Order of Life <input type="checkbox"/> Outline of Molecular and Cell Biology Other Media <input type="checkbox"/> These and other resources can be found at: http://www.abcte.org/teach/exam-preparation/Biology	{Time}

Your Notes:

"The information presented in the courses and the workshops was extremely helpful to me because they provided real examples that I have been able to implement immediately in my classroom."

–Lauren Masino, ABCTE Teacher, FL

Name:

Date:

We love to highlight ABCTE teachers in local newspapers. Not only does this provide publicity for a potential job search, it can also help highlight your school as one that is committed to providing students with the best possible teacher. Visit <http://www.abcte.org/get-involved/share-your-story>.

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Framework (Standards) Biology <input type="checkbox"/> Domain 3: Classical Genetics	<input type="checkbox"/> Review the specific Biology standard http://www.abcte.org/teach/biology-standards The following sessions can be found in your ABCTE Refresher Workshops at: http://www.abcte.org/courses/biology/index.html Classical Genetics <input type="checkbox"/> The Discovery of DNA <input type="checkbox"/> Inheritance	Web Resources <input type="checkbox"/> Ancient DNA Books <input type="checkbox"/> DNA: The Secret of Life Other Media <input type="checkbox"/> These and other resources can be found at: <input type="checkbox"/> http://www.abcte.org/teach/exam-preparation/Biology	{Time}

Your Notes:

Study Tip: Use a science survey text

A basic survey text on chemistry like Biology textbooks or the Idiot's Guide to Biology is recommended as a starting point. If you have another survey book from college, or you have access to a different text from your library, that is perfectly fine. It is important that you have access to a survey book because it will assist in covering the various domains of the exam.

Study Tip: Websites like Wikipedia and other unverified sources of information are *NOT* a good source of study. Much information found on the World Wide Web consists of unverified sources. Stick to verified sources with full citations. Many resources selected for study by our experts can be found on ABCTE's resource pages.

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Framework (Standards) Biology <input type="checkbox"/> Domain 4: Molecular Biology	<input type="checkbox"/> Review the specific Biology standard http://www.abcte.org/teach/biology-standards The following sessions can be found in your ABCTE Refresher Workshops at: http://www.abcte.org/courses/biology/index.html <input type="checkbox"/> DNA & RNA Replication <input type="checkbox"/> DNA: Genetic Storage <input type="checkbox"/> Bacterial Operons and Gene Regulation <input type="checkbox"/> DNA Technology	Web Resources <input type="checkbox"/> Beginner's Guide to Molecular Biology: Molecular Biology Notebook Online <input type="checkbox"/> Cell and Molecular Biology Online Books <input type="checkbox"/> Instant Notes in Molecular Biology <input type="checkbox"/> The Way of the Cell: Molecules, Organisms and the Order of Life <input type="checkbox"/> Outline of Molecular and Cell Biology Other Media <input type="checkbox"/> These and other resources can be found at: <input type="checkbox"/> http://www.abcte.org/teach/exam-preparation/Biology	{Time}

Your Notes:

Test Day Tip: Exam Familiarity – Did you know that your clock starts the moment you start the test? That means reading the instructions is part of the timed test. Knowing what the instructions say before you go into the testing center gives you a slight advantage. That way you simply skim through the instructions for any surprises and then get right into the exam.

Name:

Date:

Questions and concerns can be directed to the Help Desk at: <http://helpdesk.abcte.org/>
Or contact your advisor at: advisor@abcte.org.

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Framework (Standards) Biology <input type="checkbox"/> Domain 5: Evolution	<input type="checkbox"/> Review the specific Biology standard http://www.abcte.org/teach/biology-standards The following sessions can be found in your ABCTE Refresher Workshops at: http://www.abcte.org/courses/biology/index.html Evolution <input type="checkbox"/> Natural Selection <input type="checkbox"/> Evolution I <input type="checkbox"/> Evolution II <input type="checkbox"/> Evolutionary Support	Web Resources <input type="checkbox"/> Ancient DNA Books <input type="checkbox"/> DNA: The Secret of Life Other Media <input type="checkbox"/> These and other resources can be found at: <input checked="" type="checkbox"/> http://www.abcte.org/teach/exam-preparation/Biology	{Time}

Your Notes:



"The podcast for new teachers is very helpful. I have them all on my iPod and they really hit some good topics."

- Lisa Mayo, ABCTE Teacher, PA

Dr. Glen Moulton, a supervisor of instruction and life-long teacher trainer, and Michael Kelley, author of *Rookie Teaching for Dummies*, provide advice, tips, and discussions for new and veteran teachers monthly. Sign up for this great resource. It is free for anyone to download for help in the classroom:

www.newteacherhotline.com

Name:

Date:

Test Day Tip: In case of an incident on test day, like a blackout, or computer failure, do not despair!, Report the incident immediately to the Pearson VUE test center personnel and then after the exam, contact your advisor. Minor incidents may not be considered problematic so continue the test to the best of your ability.

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Framework (Standards) Biology <input type="checkbox"/> Domain 6: Comparative Physiology <input type="checkbox"/> Domain 7: Human Physiology <input type="checkbox"/> Domain 8: Plant Biology and Physiology	<input type="checkbox"/> Review the specific Biology standard http://www.abcte.org/teach/biology-standards The following sessions can be found in your ABCTE Refresher Workshops at: http://www.abcte.org/courses/biology/index.html Comparative Physiology <input type="checkbox"/> Organization <input type="checkbox"/> Embryogenesis <input type="checkbox"/> Systems and Interactions Human Physiology <input type="checkbox"/> Nervous System <input type="checkbox"/> Endocrine System <input type="checkbox"/> Digestive System <input type="checkbox"/> Circulatory System <input type="checkbox"/> Urinary System <input type="checkbox"/> The Liver <input type="checkbox"/> Reproductive System <input type="checkbox"/> Immune System <input type="checkbox"/> Musculoskeletal System Plant Biology & Physiology <input type="checkbox"/> How Do Plants Grow?	Web Resources <input type="checkbox"/> The Journal of General Physiology <input type="checkbox"/> Plant and Cell Physiology Books <input type="checkbox"/> Physiology <input type="checkbox"/> Plants and Microclimate: A Quantitative Approach to Plant Physiology <input type="checkbox"/> Anatomy and Physiology for Dummies Other Media <input type="checkbox"/> These and other resources can be found at: <input type="checkbox"/> http://www.abcte.org/teach/exam-preparation/Biology	{Time}

Your Notes:

Test Day Tip: Hydration – Did you know Gatorade has the same osmolarity as blood? That means it has the same concentration of salts and electrolytes and it makes it easier to absorb. It also means you go to the bathroom less than if you drink water.

Name:

Date:

Resource Tip: Though your advisor is not a tutor, he or she are there to answer questions on how the program works and direct you to resources to aid in your studying. The advisor's job is to help you and hundreds of other candidates make it through the program. Our advisors will take your questions when you call in, but if your question requires more discussion, they may book an appointment with you.

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Framework (Standards) Biology <input type="checkbox"/> Domain 9: Ecology	<input type="checkbox"/> Review the specific Biology standard http://www.abcte.org/teach/biology-standards The following sessions can be found in your ABCTE Refresher Workshops at: http://www.abcte.org/courses/biology/index.html Ecology <input type="checkbox"/> Ecological Growth and Limitations <input type="checkbox"/> Environmental Cycles & Factors	Web Resources <input type="checkbox"/> The Concept of the Ecosystem <input type="checkbox"/> Books <input type="checkbox"/> A Citizen's Guide to Ecology <input type="checkbox"/> A Dictionary of Ecology, Evolution and Systematics Other Media <input type="checkbox"/> These and other resources can be found at: ↻ http://www.abcte.org/teach/exam-preparation/Biology	{Time}

Your Notes:



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<http://www.abcte.org/facebook>