

## 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.

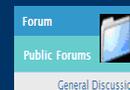
For more detail in each topic, review the exam [standards](#). The ABCTE exams are based on this blueprint, so consider this a syllabus for what you want to study.

## 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/drupal/forums>



## General Science Exam Snapshot

<b>Time Allowed</b>	240 minutes	
<b>Format</b>	Multiple-choice	
<b>Number of Questions</b>	145	
<b>On-Screen Exhibits</b> (available as relevant)	Standard calculator; Periodic Table	
<b>Passing Score</b>	Proficient: 251 Distinguished: 320	(The number of questions answered correctly is converted to a scaled score ranging from 0 to 500.)
<b>Exam Summary</b>	<b>Content Domains</b>	<b>Approximate Percentage of Examination</b>
	Scientific Investigation	15%
	Biology	22%
	Chemistry	22%
	Earth Science	20%
	Physics	21%

## ABOUT THIS EXAM

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

# ABCTE's Standards Stepwise Method

## The right way to get started: using the Standards as your syllabus

Your Self Assessment is a summary of the standards; by doing it, you have identified which ones need the most attention. The Standards are your study lifeline; you can find them on your MyAccount page. Throughout the course of your study you will learn all of them. How to begin? Here is ABCTE's Standards Stepwise method:

**1 Approach in bite-sized chunks:** don't be overwhelmed or paralyzed by how many standards there are, simply pick a topic of a domain and get started.

**2 Define the terms:** take the first three items in the topic and make sure you know all the terms. Look up any you do not recognize. After all, you cannot answer a question definitively if you don't even know the terms.

## Domain 1: Instructional Design

### Topic 1: Selects, Organizes, Plans, and Designs Content

1.1.01	Writes measurable objectives for both individual or classroom performance based on student data and subject matter.
1.1.02	Guides curricular planning (e.g., content clusters, instructional methods, learning activities and assessment tools) based on goals of the instruction.
1.1.03	Substantiates or illustrates ideas.
1.1.04	Juxtaposes examples that differ in many ways but are the same in defining features, so that students can generalize to new examples and learn to discriminate same/different when faced with new examples.
1.1.05	Plans lessons, depending on size and content of unit, so that important ideas or skills are studied on several occasions rather than all at once.
1.1.06	Selects lessons and activities that are appropriate for the students and the content.
1.1.07	

Guides **curricular planning** (e.g., **content clusters**, instructional methods, learning activities and assessment tools) based on goals of the instruction.

**3 Use the required resources** in your Study Plan or a broad survey text to refresh your memory on the topic.

**4 Use the appropriate recommended resources** to probe deeper if you need better understanding. Use the Standards to target the sections you need to read.

**5 Your Notes:** go to the resources section of ABCTE.org and identify additional resources to use as needed. Use the Forums to see what other people are using.

**6 Check for understanding and reflect:** think about how you would use this in a classroom or how you would teach the subject. Use your quizzes to check for understanding and move on.

**7 Wash, rinse, and repeat:** once you finish a chunk of three, go back and attack the next three.

**PROFESSIONAL TEACHING KNOWLEDGE STUDY PLAN**

for \_\_\_\_\_ Area \_\_\_\_\_

AMERICAN BOARD  
for Certification of Teacher Excellence

**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: [www.abcte.org/teach/learn-preparation](http://www.abcte.org/teach/learn-preparation). 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. Your advisor will provide you with a more efficient, customized plan based on your needs.

Area of Study	Required Resource	Recommended Resource	(Time)
<input type="checkbox"/> Instructional Delivery <input type="checkbox"/> Communicating effectively <input type="checkbox"/> Presents clear and focused instruction <input type="checkbox"/> Effective questioning techniques <input type="checkbox"/> Makes efficient use of learning time <input type="checkbox"/> Applications <input type="checkbox"/> Research Strategies	<input type="checkbox"/> Review the specific PTK standard <a href="http://www.abcte.org/teach/teaching-standards">http://www.abcte.org/teach/teaching-standards</a> The corresponding Prepare to Teach Workshops can be found at: <a href="http://www.abcte.org/prepare-to-teach">http://www.abcte.org/prepare-to-teach</a> The Characteristics of Successful Teachers <input type="checkbox"/> Characteristics 1- 8 <input type="checkbox"/> Characteristics 9 - 16 <input type="checkbox"/> VIDEO CASE STUDIES: Characteristics of Successful Teachers (13:57) Pedagogy and Instructional Design <input type="checkbox"/> How Students Learn <input type="checkbox"/> Whole Group Strategies Part 1 <input type="checkbox"/> Whole Group Strategies Part 2 <input type="checkbox"/> Small Group Strategies and Individual Instruction <input type="checkbox"/> Lesson Closure <input type="checkbox"/> VIDEO CASE STUDIES: Pedagogy and Instructional Design (14:58)	<input type="checkbox"/> Web Resources <input type="checkbox"/> <a href="#">Understanding Instructional Design</a> <input type="checkbox"/> <a href="#">Instructional Design</a> <input type="checkbox"/> <a href="#">Glossary of Education Terms</a> <input type="checkbox"/> Books <input type="checkbox"/> <a href="#">Effective Teaching Methods: Research-Based Strategies</a> <input type="checkbox"/> <a href="#">The First Day of School: How to Be an Effective Teacher</a> <input type="checkbox"/> <a href="#">Books: Teaching for Learning</a> <input type="checkbox"/> These and other resources can be found at: <a href="http://www.abcte.org/teach/prepare-to-teach/instructional-design">http://www.abcte.org/teach/prepare-to-teach/instructional-design</a>	

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.

1-877-668-2228 • [www.abcte.org](http://www.abcte.org) • [advisor@abcte.org](mailto:advisor@abcte.org)

### Have a Plan

It is important to have a plan of attack to study. Block out set times to study and if you slip and miss a session, restart your plan instead of letting yourself get paralyzed and procrastinate.

## 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/drupal/teach/exam-preparation>. 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.

## BIOLOGY

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Biochemical Basis of Life  <input type="checkbox"/> Cell Biology	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  The following sessions can be found in your ABCTE Refresher Workshops at: <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  <b>Biochemical Basis of Life</b> <input type="checkbox"/> Biochemical Basis of Life <input type="checkbox"/> Lipids <input type="checkbox"/> Proteins <input type="checkbox"/> Nucleotides & Nucleic Acids <input type="checkbox"/> Discovering Cells  <b>Cell Biology</b> <input type="checkbox"/> Prokaryotes <input type="checkbox"/> Cells: Pieces & Parts <input type="checkbox"/> A Little In and A Little Out <input type="checkbox"/> Cellular Energetics <input type="checkbox"/> Specialized Cells <input type="checkbox"/> Eukaryotes <input type="checkbox"/> Viruses	<b>Websites:</b> <input type="checkbox"/> <a href="#">Biological Evolution</a> <input type="checkbox"/> <a href="#">Cell and Molecular Biology Online</a>  <b>Books:</b> <input type="checkbox"/> <a href="#">Lehninger Principles of Biochemistry</a> <input type="checkbox"/> <a href="#">Schaum's Outline of Biochemistry</a> <input type="checkbox"/> <a href="#">Cells, Gels and the Engines of Life</a> <input type="checkbox"/> <a href="#">Dictionary of Cell Biology</a>  <input type="checkbox"/> <b>These and other <a href="#">resources</a> can be found at:</b> <input checked="" type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	(Time)

## Your Notes:

**Note:** The recommended resources are often freely accessible online or can be found in your library. To ease your search, we have hyperlinked them.

## 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.

## BIOLOGY

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Biology- Classical Genetics and Molecular Biology  <input type="checkbox"/> Biology- Evolution	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  The following sessions can be found in your ABCTE Refresher Workshops at: <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  <b>Genetics and Molecular Biology</b> <input type="checkbox"/> Classical Genetics <input type="checkbox"/> DNA and RNA Replication <input type="checkbox"/> DNA: Genetic Storage <input type="checkbox"/> Gene Regulation  <b>Evolution</b> <input type="checkbox"/> Evolution <input type="checkbox"/> Speciation	<b>Websites:</b> <input type="checkbox"/> <a href="#">Beginner's Guide to Molecular Biology: Molecular Biology Notebook Online</a>  <input type="checkbox"/> <a href="#">Biological Evolution</a>  <b>Books:</b> <input type="checkbox"/> <a href="#">DNA: The Secret of Life</a> <input type="checkbox"/> <a href="#">Origin of Species</a> <input type="checkbox"/> <a href="#">The Complete Idiot's Guide to Biology</a>  <input type="checkbox"/> <b>These and other resources can be found at:</b> <input checked="" type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{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

Name:

Date:

## 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.

## BIOLOGY

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Biology- Animal Physiology  <input type="checkbox"/> Biology- Plant Physiology  <input type="checkbox"/> Ecology	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  <b>The following sessions can be found in your ABCTE Refresher Workshops at:</b> <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  <b>Animal Physiology</b> <input type="checkbox"/> Organization - from cells to organ system <input type="checkbox"/> Organ Systems <input type="checkbox"/> Organ Systems II  <b>Plant Physiology</b> <input type="checkbox"/> Plants <input type="checkbox"/> Plant Growth  <b>Ecology</b> <input type="checkbox"/> Ecology <input type="checkbox"/> Ecological Growth and Limits <input type="checkbox"/> Environmental Cycles	<b>Websites:</b> <input type="checkbox"/> <a href="#">The Journal of General Physiology</a> <input type="checkbox"/> <a href="#">Plant Physiology</a>  <b>Books:</b> <input type="checkbox"/> <a href="#">Physiology</a> <input type="checkbox"/> <a href="#">Plants and Microclimate: A Quantitative Approach to Plant Physiology</a> <input type="checkbox"/> <a href="#">The Concept of the Ecosystem</a> <input type="checkbox"/> <a href="#">Ecology.com</a>  <input type="checkbox"/> <b>These and other resources can be found at:</b> <input checked="" type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{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

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>.

## CHEMISTRY

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Chemistry- Periodic Table and Trends  <input type="checkbox"/> Chemistry- Quantum Mechanics	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  <b>The following sessions can be found in your ABCTE Refresher Workshops at:</b> <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  <b>Periodic Table</b> <input type="checkbox"/> Tools of the Trade: the Periodic Table  <b>Quantum Mechanics</b> <input type="checkbox"/> Quantum Mechanics - Electron configurations and orbital diagrams	<b>Websites:</b> <input type="checkbox"/> <a href="#">WebElements</a> <input type="checkbox"/> <a href="#">Quantum Mechanics</a>  <b>Books:</b> <input type="checkbox"/> <a href="#">A Well-Ordered Thing: Dmitrii Mendeleev and the Shadow of the Periodic Table</a> <input type="checkbox"/> <a href="#">The Cartoon Guide to Chemistry</a> <input type="checkbox"/> <a href="#">Introduction to Quantum Mechanics</a> <input type="checkbox"/> <a href="#">Schaum's Outline of Quantum Mechanics</a> <input type="checkbox"/> <a href="#">What Is Quantum Mechanics?: A Physics Adventure</a>  <input type="checkbox"/> <b>These and other resources can be found at:</b> <input checked="" type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{Time}

Your Notes:

### Study Tip: Use a science survey text

A basic survey text on chemistry like *The Cartoon Guide to Chemistry* or *The Idiot's Guide to Chemistry* 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.

## CHEMISTRY

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Chemistry- Molecular Bonding and Structure  <input type="checkbox"/> Chemistry- Chemical Naming and Formulas	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  The following sessions can be found in your ABCTE Refresher Workshops at: <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  Molecular Bonding and Structure <input type="checkbox"/> Bonding and Atomic Structure <input type="checkbox"/> Physical Chemistry  Chemical Naming and Formulas <input type="checkbox"/> Formulae and Naming Compounds	Websites: <input type="checkbox"/> <a href="#">Organic Chemistry Online</a> <input type="checkbox"/> <a href="#">Chemical Formulas Review</a>  Books: <input type="checkbox"/> <a href="#">Structure and Bonding</a> <input type="checkbox"/> <a href="#">Introductory Chemistry</a> <input type="checkbox"/> <a href="#">The Complete Idiot's Guide to Chemistry</a>  <input type="checkbox"/> These and other <a href="#">resources</a> can be found at: <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{Time}

Your Notes:

**Exam Tip:** When questions seem to have more than one right answer, it is likely that you are not catching a distractor. In your practice, see if your first instinct tends to give you the right answer. More often than not, it does if you have studied well. On test day, when you get stuck you can rely on your gut and move on without using up too much time. This is true for the "Best" question type as well. More than one answer may seem correct, but the right answer will not need an extra step.

**Spread the Word:** Though many people talk about teaching as a second career, few people act on it and make a difference. Whether it is finding the means or the courage to take the first step in choosing a path, many people don't know a program like ABCTE even exists to simplify the process. The power of your actions can be the inspiration for the beginning of a career for friends or family.

## CHEMISTRY

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Chemistry- Chemical Reactions and Stoichiometry  <input type="checkbox"/> Chemistry- Electrochemistry	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  The following sessions can be found in your ABCTE Refresher Workshops at: <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  Chemical Reactions and Stoichiometry <input type="checkbox"/> Reactions and Stoichiometry <input type="checkbox"/> Reaction Rates  Electrochemistry <input type="checkbox"/> Oxidation and Reduction	Websites: <input type="checkbox"/> <a href="#">Stoichiometry and Balancing Chemical Equations</a> <input type="checkbox"/> <a href="#">Electrochemistry</a>  Books: <input type="checkbox"/> <a href="#">Chemical Kinetics and Reaction Dynamics</a> <input type="checkbox"/> <a href="#">Fundamentals of Chemical Reaction Engineering</a> <input type="checkbox"/> <a href="#">Analytical Electrochemistry</a> <input type="checkbox"/> <a href="#">Modern Electrochemistry 1: Ionics</a> <input type="checkbox"/> <a href="#">Modern Electrochemistry 2A: Fundamentals of Electrodeics</a>  <input type="checkbox"/> These and other <a href="#">resources</a> can be found at: <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{Time}

Your Notes:

**Study Tip:** When you see an unfamiliar concept in the standards a good place to start is your survey text. Go to the index and look for the unknown person or term.

Name:

Date:

**Test Day Tip:** Familiarity with the exam is one of the most important ways to get prepared. Start with the standards and the domains and make sure to study hard, but don't underestimate the importance of being familiar with test day. Visit your testing location before you have to test. Know what to expect by way of writing boards, computers, and waiting rooms. Realize that there will be administrative parts of the test you will have to complete in addition to the exam itself.

## CHEMISTRY

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Chemistry- Solution Chemistry  <input type="checkbox"/> Chemistry- Gas Laws  <input type="checkbox"/> Chemistry- Nuclear Chemistry	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  The following sessions can be found in your ABCTE Refresher Workshops at: <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  Solution Chemistry <input type="checkbox"/> Solutions  Gas Laws <input type="checkbox"/> Gas Laws, Ideal Gas, and Kinetic Molecular Theory  Nuclear Chemistry <input type="checkbox"/> Nuclear Fission and Fusion	Websites: <input type="checkbox"/> <a href="#">Gas Laws</a>  Books: <input type="checkbox"/> <a href="#">Chemical Kinetics: The Study of Reaction Rates in Solution</a> <input type="checkbox"/> <a href="#">Chemistry: Concepts and Problems: A Self-Teaching Guide</a> <input type="checkbox"/> <a href="#">Chemistry for Dummies</a> <input type="checkbox"/> <a href="#">Molecular Collision Theory</a>  <input type="checkbox"/> These and other <a href="#">resources</a> can be found at: <input checked="" type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{Time}

Your Notes:

*Every resource the ABCTE provided was helpful in gaining the knowledge needed to succeed as a teacher. The refresher courses were well organized and easy to follow and the personal mentor I was provided with really helped me plot a course for success as a teacher.*

-Mark Peniston, ABCTE Teacher, FL

**Test Day Tip:** Did you know that the most important night to get a good night's sleep is not the night before but rather two nights before your exam? If you have ever pulled an all nighter, you will remember feeling pretty good the next day, though you end up falling asleep early. Get plenty of rest and take care of yourself the entire week for your exam.

## EARTH SCIENCE

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Earth Science- Astronomy and Cosmology  <input type="checkbox"/> Earth Science- Structure and Composition of Earth  <input type="checkbox"/> Earth Science- Earth's Magnetic Fields, Plate Tectonics and Structural Geology	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  The following sessions can be found in your ABCTE Refresher Workshops at: <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  Astronomy and Cosmology <input type="checkbox"/> Astronomy and Cosmology  Structure and Composition of Earth <input type="checkbox"/> Earth Structures and Composition  Magnetic Fields, Plate Tectonics and Structural Geology <input type="checkbox"/> Magnetic Field, Plate Tectonics and Structural Geology	Websites: <input type="checkbox"/> <a href="#">Cosmology and Astronomy</a> <input type="checkbox"/> <a href="#">Geoscience: The Earth</a> <input type="checkbox"/> <a href="#">A Plate Tectonic Primer</a> <input type="checkbox"/> <a href="#">Plate Tectonics</a> <input type="checkbox"/> <a href="#">The Earth's Magnetic Field</a>  Books: <input type="checkbox"/> <a href="#">Astronomy for Dummies</a> <input type="checkbox"/> <a href="#">An Introduction to the Science of Cosmology</a> <input type="checkbox"/> <a href="#">Earth Science</a> <input type="checkbox"/> <a href="#">Earth Magnetism: A Guided Tour through Magnetic Fields</a> <input type="checkbox"/> <a href="#">Plate Tectonics and Crustal Evolution</a>  <input type="checkbox"/> <b>These and other resources can be found at:</b> <input checked="" type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{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 art 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:

**Test Day Tip:** Don't underestimate nutrition and fitness when taking standardized tests! This a four hour event and much like sporting events, it is necessary to eat right, hydrate well, and manage your energy. You want to avoid sugars; instead jumpstart your brain with a carbohydrate like toast or a bagel and follow with a protein for long term energy. Fruits or energy bars are good snacks but avoid stimulants if possible.

## EARTH SCIENCE

Area of Study	Required Resource	Recommended Resource	Time
<ul style="list-style-type: none"> <li><input type="checkbox"/> Earth Science- History of the Earth</li> <li><input type="checkbox"/> Earth Science- Earth's Atmosphere</li> <li><input type="checkbox"/> Earth Science- Earth's Water                             <ul style="list-style-type: none"> <li><input type="checkbox"/> Earth Science- Earth's Resources and Hazards</li> </ul> </li> </ul>	<p>Review the specific General Science standard</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <a href="http://www.abcte.org/teach/science-standards">http://www.abcte.org/teach/science-standards</a></li> </ul> <p><b>The following sessions can be found in your ABCTE Refresher Workshops at:</b> <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a></p> <p><b>History of the Earth</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The History of the Earth</li> </ul> <p><b>Earth's Atmosphere</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The Atmosphere--An Ocean of Air</li> <li><input type="checkbox"/> A Short History of the Atmosphere</li> <li><input type="checkbox"/> The Layers of the Atmosphere</li> <li><input type="checkbox"/> Measuring &amp; Forecasting the Weather</li> <li><input type="checkbox"/> Clouds &amp; Weather</li> <li><input type="checkbox"/> Solar Radiation &amp; the Atmosphere</li> </ul> <p><b>Earth's Water</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The Earth's Water</li> <li><input type="checkbox"/> Water on the Move</li> <li><input type="checkbox"/> The Oceans</li> </ul> <p><b>Earth's Resources and Hazards</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Resources &amp; Hazards</li> </ul>	<p><b>Websites:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <a href="#">Geoscience</a></li> <li><input type="checkbox"/> <a href="#">Ocean World</a></li> <li><input type="checkbox"/> <a href="#">Water Science for Schools</a></li> <li><input type="checkbox"/> <a href="#">Environmental News Network</a></li> </ul> <p><b>Books:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <a href="#">A Short History of Planet Earth: Mountains, Mammals, Fire, and Ice</a></li> <li><input type="checkbox"/> <a href="#">Earth: An Intimate History</a></li> <li><input type="checkbox"/> <a href="#">Atmospheric Pollution</a></li> <li><input type="checkbox"/> <a href="#">National Audubon Society Field Guide to North American Weather</a></li> <li><input type="checkbox"/> <a href="#">The USA Today Weather Book: An Easy-To-Understand Guide to the USA's Weather</a></li> <li><input type="checkbox"/> <a href="#">Essentials of Oceanography</a></li> <li><input type="checkbox"/> <a href="#">Glaciers and Glaciation</a></li> <li><input type="checkbox"/> <a href="#">Environmental Science: Toward a Sustainable Future</a></li> </ul> <p><input type="checkbox"/> <b>These and other resources can be found at:</b> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a></p>	<p>{Time}</p>

Your Notes:

Name:

Date:

## Study Tip: Use a science survey text

A basic survey text like *The Cartoon Guide to Physics* or *The Complete Idiot's guide to Physics* 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.

## PHYSICS

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Physics- General Mathematics and Kinematics  <input type="checkbox"/> Physics- Dynamics  <input type="checkbox"/> Physics- Work Energy Power and Momentum	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  The following sessions can be found in your ABCTE Refresher Workshops at: <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  <input type="checkbox"/> Work, Energy, Power, & Momentum	Websites: <input type="checkbox"/> <a href="http://Easyphysics.net">Easyphysics.net</a> <input type="checkbox"/> <a href="#">Mechanics, Kinematics</a> <input type="checkbox"/> <a href="#">Plus2Physics</a> <input type="checkbox"/> <a href="#">Physics - Dynamics</a> <input type="checkbox"/> <a href="#">The Physics Classroom</a> <input type="checkbox"/> <a href="#">Momentum, Work and Energy</a> <input type="checkbox"/> <a href="#">Hyperphysics</a>  Books: <input type="checkbox"/> <a href="#">Physics Demystified : A Self-Teaching Guide</a> <input type="checkbox"/> <a href="#">How Things Work: The Physics of Everyday Life</a> <input type="checkbox"/> <a href="#">Concepts of Force: A Study in the Foundations of Dynamics</a> <input type="checkbox"/> <a href="#">Engineering Mechanics, Dynamics</a> <input type="checkbox"/> <a href="#">The Complete Idiot's Guide to Physics</a>  <input type="checkbox"/> These and other <a href="#">resources</a> can be found at: <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{Time}

Your Notes:

**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.

**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.

## PHYSICS

Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Physics- Mechanics of Fluids  <input type="checkbox"/> Physics- Thermodynamics  <input type="checkbox"/> Physics- Waves	Review the specific General Science standard <input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a>  <b>The following sessions can be found in your ABCTE Refresher Workshops at:</b> <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a>  <b>Fluids</b> <input type="checkbox"/> Mechanics of Fluids  <b>Thermodynamics</b> <input type="checkbox"/> Thermodynamics  <b>Waves</b> <input type="checkbox"/> Mechanical Waves	<b>Websites:</b> <input type="checkbox"/> <a href="#">Fluid Mechanics</a> <input type="checkbox"/> <a href="#">Waves</a> <input type="checkbox"/> <a href="#">Thermodynamics and Thermal Physics</a> <input type="checkbox"/> <a href="#">Mechanical Waves</a>  <b>Books:</b> <input type="checkbox"/> <a href="#">Waves in Fluids</a> <input type="checkbox"/> <a href="#">Mechanics of Fluids</a> <input type="checkbox"/> <a href="#">Schaum Engineering Thermodynamics</a> <input type="checkbox"/> <a href="#">Cymatics: A Study of Wave Phenomena and Vibration</a> <input type="checkbox"/> <a href="#">Linear and Nonlinear Waves</a> <input type="checkbox"/> <a href="#">The Cartoon Guide to Physics</a>  <input type="checkbox"/> <b>These and other <a href="#">resources</a> can be found at:</b> <input checked="" type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a>	{Time}

Your Notes:

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

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.

PHYSICS			
Area of Study	Required Resource	Recommended Resource	Timeline
<input type="checkbox"/> Physics- Electricity  <input type="checkbox"/> Physics- Magnetism and Electromagnetism  <input type="checkbox"/> Physics- Optics	<p>Review the specific General Science standard</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/science-standards">http://www.abcte.org/drupal/teach/science-standards</a></li> </ul> <p>The following sessions can be found in your ABCTE Refresher Workshops at:  <a href="http://www.abcte.org/drupal/courses/general-science/index.html">http://www.abcte.org/drupal/courses/general-science/index.html</a></p> <p>Electricity</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Electricity</li> </ul> <p>Magnetism and Electromagnetism</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Magnetism &amp; Electromagnetism</li> </ul> <p>Optics</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Optics</li> </ul>	<p>Websites:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <a href="#">Electricity and Magnetism</a></li> <li><input type="checkbox"/> <a href="#">What is Static Electricity?</a></li> <li><input type="checkbox"/> <a href="#">Electricity and Magnetism</a></li> <li><input type="checkbox"/> <a href="#">The Optics</a></li> <li><input type="checkbox"/> <a href="#">Atmospheric Optics</a></li> </ul> <p>Books:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <a href="#">Basic Electricity</a></li> <li><input type="checkbox"/> <a href="#">Delmar's Standard Textbook of Electricity</a></li> <li><input type="checkbox"/> <a href="#">Classical Electricity and Magnetism: Second Edition</a></li> <li><input type="checkbox"/> <a href="#">Treatise on Electricity and Magnetism, Vol. 2</a></li> <li><input type="checkbox"/> <a href="#">Introduction to Modern Optics</a></li> <li><input type="checkbox"/> <a href="#">Optics</a></li> <li><input type="checkbox"/> <a href="#">Principles of Optics: Electromagnetic Theory of Propagation, Interference and Diffraction of Light</a></li> </ul> <p><input type="checkbox"/> These and other <b>resources</b> can be found at:  <input checked="" type="checkbox"/> <a href="http://www.abcte.org/drupal/teach/exam-preparation/General-Science">http://www.abcte.org/drupal/teach/exam-preparation/General-Science</a></p>	{Time}

Your Notes:

Did you know that ABCTE is on Facebook? Come be an ABCTE fan.  
<http://www.abcte.org/facebook>