PHYSICS STUDY PLAN

for Name:

Date:

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:

American Board is committed to making sure you are the best possible

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

American Board exams are based on this blueprint, so consider this a syllabus for what you want to study.

Your Materials

Standards: a list of everything that might be on the test.

Study Plan: your syllabus with links to what you need to study for each section. Study Materials: an overview course materials on topics you will be tested on.

Practice Exam/Section Quizzes: sample test questions and solutions.

Physics Exam Snapshot

Time Allowed	240 minutes		
Format	Multiple-choice		
Number of Questions	125		
On-Screen Exhibits	Scientific calculator; Forn	nula sheet	
Passing Score	Proficient: 258 (The number of questions answered correctly converted to a scaled score ranging from 0 to		•
	Content Domains		Approximate Percentage of Examination
	General Science Knowledge		6%
Evons Cummons	Scientific Investigation		7%
Exam Summary	Classical Mechanics		24%
	Fluids and Thermodynamics		12%
	Electricity and Magnetism		24%
	Waves and Opt	tics	15%
	Modern Physi	cs	12%

About This Exam

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

How to use American Board 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 midterm and final to work on your timing and endurance. You can use them again in explore mode to identify distractors.

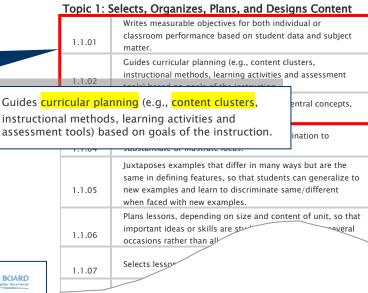
American Board's Standards Stepwise Method

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

Your Self Assessment is a summary of the standards; by completing this, 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 our 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 are do not recognize. After all, you cannot answer a question definitively if you don't even know the terms.



Domain 1: Instructional Design

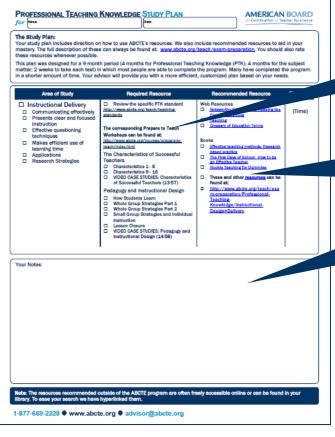
3 Use the required resources in your Study Plan or a broad survey text to refresh your memory on the topic.

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 Ameanboard.org and identify additional resources to use as needed.

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.

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



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.



PHYSICS STUDY PLAN for Name: Date: The Study Plan: Your study plan includes direction on how to use American Board's resources. We also include recommended resources to aid in your mastery. Those resources can be found on your Dashboard for this course. 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. Recommended Resource **Area of Study Required Resource Timeline** Web Resources Review the specific **Physics** Domain 1: Scientific п Easyphysics.net standards HERE. {Time} Investigation **The Physics Classroom Water Science for Schools Domain 2: General** WebElements The corresponding sessions can be **Introductory Physics Notes** Science Knowledge found in your American Board Study Materials. **Books** ☐ The Practical Geologist Scientific Knowledge ☐ Chemistry: Concepts and Problems: Scientific Method A Self-Teaching Guide Physics Demystified: A Self-Teaching Measurement and Analysis Guide **General Science** Review **Your Notes:**

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

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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
☐ Domain 3: Classical Mechanics	□ Review the specific Physics standards, found HERE.	Web Resources ☐ American Board Physics Exam Formulas and Constants ☐ Khan Academy: Physics	{Time}
Topic 1: Kinematics and Dynamics	The corresponding sessions can be found in your American Board Study		
□ Topic 2: Work, Energy, Power and Momentum	Materials. Classical Mechanics	Books ☐ Engineering Mechanics, Dynamics ☐ Conceptual Physics with Practicing	
☐ Topic 03: Rotational Motion☐ Topic 04: Universal	□ Kinematics □ Dynamics I □ Dynamics II	Physics Workbook	
Gravitation	☐ Energy and Work ☐ Momentum and Impulse		
	□ Angular Kinematics and Dynamics □ Angular momentum and Rotational Kinetic Energy		
	□ Universal Gravitation and Kepler's Law □ Gravitational Potential Energy □ Motions of the Sun and Moon		
	Review		

Your Notes:	
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"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

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this and other issues, practice as m Familiarity with the test and its star	test on a computer. On average, people read such as you can on the computer to become o ndards will go a long way towards your succes practice to get a feel for the testing environme	comfortable working in that environ is.	
Area of Study	Required American Board Resource	Recommended Resource	Timeline
 □ Domain 4: Fluids and Thermodynamics □ Topic 1: Mechanics of Life (Liquids or Gases) □ Topic 2: Thermodynamics 	□ Review the specific Physics standards HERE. The following sessions can be found in your American Board Study Materials. Fluids and Thermodynamics □ Density and Pressure of a Fluid □ States of Matter □ The Four Laws of Thermodynamics □ Review	Web Resources ☐ Fluid Mechanics ☐ Thermodynamics and Thermal Physics ☐ About Temperature Books ☐ The Complete Idiot's Guide to Physics ☐ College Physics	{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

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	rd teachers in local newspapers. Not only ur school as one that is committed to prog/share-your-story/		
Area of Study	Required Resource	Recommended Resource	Timeline
□ Domain 5: Electricity and Magnetism □ Topic 1: Electrostatics □ Topic 2: Electric Currents □ Topic 3: Magnetism □ Topic 4: Ampère's Law, Faraday's Law, and Maxwell's Equations	Review the specific Physics standards HERE. The following sessions can be found in your American Board Study Materials. Electricity and Magnetism Elementary Charges and Net Electric Charge Coulomb's Law Electric Fields Graphs of Electric Fields Electrostatic Potential and Electric Potential Energy Electric Current, Ohm's Law, Electric Energy and Power Resistors in Series and in Parallel Magnets and Their Properties Magnetic Force and Its Equations The Laws of Ampere, Faraday and Lenz Inductance and Maxwell's Equations Review	Web Resources Electricity and Magnetism Hyperphysics VRML Gallery of Electromagnetism Books Classical Electricity and Magnetism: Second Edition Basic Electricity	{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.

PHYSICS STUDY PLAN for Name:	Date:		
	a can be a good source of study, but makerified sources with full citations. Many burce pages.		
Area of Study	Required Resource	Recommended Resource	Timeline
 □ Domain 6: Waves and Optics □ Topic 1: Waves □ Topic 2: Geometrical (Ray) Optics □ Topic 3: Physical (Wave) Optics 	□ Review the specific Physics standards HERE. The following sessions can be found in your American Board Study Materials. Waves and Optics □ Types and Properties of Waves □ Sound Waves and Electromagnetic Waves □ Reflection □ Refraction □ Lenses □ Diffraction and Interference □ Thin Film Interference □ Review	Web Resources ☐ Waves ☐ Geometric Optics ☐ MIT OpenCourseWare: Physics III: Vibrations and Waves Books ☐ Introduction to Modern Optics	{Time}
Your Notes:			

PHYSICS STUDY PLAN for Name:	Date:	
Questions and concerns can be directed to the Help	Desk. Log into your Dashboard to subn	nit a Help Desk ticket.

Area of Study	Required Resource	Recommended Resource	Timeline
☐ Domain 7: Modern Physics	□ Review the specific Physics standards HERE. The following sessions can be found in your American Board Study Materials.	Web Resources ☐ Relativity Tutorial ☐ Fear of Physics ☐ Light and Matter	{Time}
	Modern Physics Special Relativity The Experiments of Modern Physics The Physics of the Atom I The Physics of the Atom II Review	Books ☐ Introduction to Modern Optics	

Your Notes:	

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