



آغا خان یونیورسٹی ایگزامینیشن بورڈ  
AGA KHAN UNIVERSITY EXAMINATION BOARD

## Teaching and Learning Resources for Grade IX Physics

### Recommended Key Textbook:

Punjab Textbook Board (2012). *Physics 9*. Lahore: Punjab Textbook Board.

Additional Recommended Resource Material				
Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
1	Physical Quantities and Measurement	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 4: Measuring	
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 3: Matter and Molecules	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 1: Measurements	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 2: Measurements	

Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
2	Kinematics	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 8: Motion	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.123physics.com">http://www.123physics.com</a> <a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 5: Motion and Energy	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 3: Speed, Velocity and Acceleration Unit 5: Vectors	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 4: Kinematics	
3	Dynamics	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 5: Forces	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.123physics.com">http://www.123physics.com</a> <a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 5: Motion and Energy	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 2: Force of Gravity, Weight and Friction Unit 4: Newton's Laws of Motion	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 5: Force and Motion	

Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
4	Turning Effect of Forces	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 5: Forces	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a>
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 6: Turning Forces	<a href="http://www.123physics.com">http://www.123physics.com</a>
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 6: Statics	<a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
5	Gravitation	Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 7: Circular Motion and Gravitation	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.123physics.com">http://www.123physics.com</a> <a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
6	Work and Energy	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 7: Machines	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.123physics.com">http://www.123physics.com</a>
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 7: Work, Energy and Power	<a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 8: Work, Energy and Power	

Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
7	Properties of Matter	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 9: Some Properties of Matter	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a>
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 10: Pressure in Liquids and Gases	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 10: Matter	
8	Thermal Properties of Matter	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 10: Heat and Matter	<a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 6: Heat and Energy	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 15: Expansion of Solids and Liquids	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 11: Heat	

Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
9	Transfer of Heat	Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 6: Heat and Energy	<a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 17: Transmission of Heat	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 11: Heat	

**Note:** This resource list has been prepared primarily for teachers. While it can be shared with students, students should not be required to buy multiple books. Schools are encouraged to stock these books in the library. Moreover, these are only suggestions which have been compiled for the ease of teachers and students; schools are encouraged to use other resources for teaching and learning as well, as long as they are in line with the student learning outcomes (SLOs) mentioned in AKU-EB syllabi. Unless specified, AKU-EB does not endorse any of these books or websites. You are advised to use an ad-blocker while accessing the websites. In case any website is not functional for any reason, you may inform us at [examination.board@aku.edu](mailto:examination.board@aku.edu) for an alternative or search material via any search engine. If you have any query, please contact us via email.



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## Teaching and Learning Resources for Grade X Physics

### Recommended Key Textbook:

Punjab Textbook Board (2012). *Physics 10*. Lahore: Punjab Textbook Board.

Additional Recommended Resource Material				
Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
10	Simple Harmonic Motion and Waves	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 20: Vibrations and Waves	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 2: Waves and Sound	<a href="http://www.123physics.com">http://www.123physics.com</a>
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 27: Longitudinal Waves and Sound	<a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 12: Waves and Sound	

Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
11	Sound	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 21: Sound Waves	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 2: Waves and Sound	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 27: Longitudinal Waves and Sound Unit 28: Musical Sounds	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 12: Waves and Sound	
12	Geometrical Optics	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 2: Light Rays and Refraction Unit 3: Lenses and Optical Instruments	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.123physics.com">http://www.123physics.com</a> <a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 1: Light and Sight	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 21: Light Rays and Reflection of Light Unit 22: Spherical Mirrors Unit 23: Refraction at Plane Surfaces Unit 24: Lenses and Optical Instruments	

Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 13: Propagation and Reflection of Light Unit 14: Refraction of Light and Optical Instruments	
13	Electrostatics	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 11: Static Electrons	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.123physics.com">http://www.123physics.com</a> <a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 7: Electricity and Electromagnetic Effects	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 32: Static Electricity	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 16: Electricity	
14	Current Electricity	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 12: Electric Current	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.123physics.com">http://www.123physics.com</a> <a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 7: Electricity and Electromagnetic Effects	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 35: Current, Electromotive Force and Resistance	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 16: Electricity	



Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
15	Electromagnetism	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 14: Magnetism and Electromagnetism	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.123physics.com">http://www.123physics.com</a> <a href="http://www.physicsclassroom.com/class">http://www.physicsclassroom.com/class</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 7: Electricity and Electromagnetic Effects	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 31: Magnetic Fields Unit 36: Magnetic Effect of an Electric Current Unit 38: The Principle of the Electric Motor	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 17: Magnetism and Electromagnetism	
16	Introductory Electronics	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 16: Electronics	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a>
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 45: Electrons in Solids, and Semiconductor Devices	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 18: Electronics	
17	Information and Communication Technology	Nil	Nil	Nil

Topic No.	Topic Title	Reference Book	Topic in the Reference Book	Website
18	Radioactivity	John Avison, (Rev Edition). <i>The World of Physics</i> . Nelson.	Unit 18: Radioactivity	<a href="http://phet.colorado.edu/">http://phet.colorado.edu/</a> <a href="http://www.particleadventure.org">www.particleadventure.org</a>
		Duncan, Tom and Kennett, Heather. South Asia Edition, <i>Cambridge IGCSE Physics</i> , (3'd Ed). Hodder Edition.	Unit 8: Electrons and Atoms	
		Abbot, A. F. (1989). <i>Physics</i> . India: Heinemann Educational Publishers.	Unit 46: Atomic Structure, the Quantum Theory and Radioactivity	
		Sindh Textbook Board (2017). <i>A Textbook of Physics for Classes IX and X</i> . Jamshoro: Sindh Textbook Board.	Unit 19: Nuclear Physics	

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