

PASADENA INDEPENDENT SCHOOL DISTRICT

COURSE SEQUENCE

INTEGRATED PHYSICS AND CHEMISTRY – A (chemistry)

[Texas Essential Knowledge and Skills \(TEKS\)](#)

**Important resources for entire science curriculum:**

**TRACK**

*TAKS readiness (links to lessons, activities, video, etc.)*

**United Streaming Video**

*Streaming educational video on thousands of topics*

**Science Materials**

*Free science interactive lessons*

**\*\*Instructional Days**

**[number]**- reflects **total** number of instructional days available in each six week period minus **3** days for review and testing

**(number)**- reflects recommended instructional days for each instructional topic within each six week period.

**Important Dates**

**First Semester**

**First Six Weeks:** Aug10- Sept 15 [23] Instructional Days  
**Second Six Weeks:** Sept 18- Oct 27 [27] Instructional Days  
**Third Six Weeks:** Oct 30- Dec 15 [26] Instructional Days

**Second Semester**

**Fourth Six Weeks:** Jan 3- Feb 16 [29] Instructional Days  
**Fifth Six Weeks:** Feb 19- April 5 [24] Instructional Days  
**Sixth Six Weeks:** April 10- May 24 [33] Instructional Days

**Science TAKS Test: Thursday April 19, 2007- 8th, 10th, and 11th grades**

# FIRST SEMESTER

[23]



## First Six Weeks

**Laboratory Investigation and Inquiry Process are applied to all instruction, assessment and learning processes. TEKS 1AB, 2ABCD, 3ABCDE**

Represents the total number of instructional days available in each six-week period minus 3 days for review and testing.

Reflects recommended instructional days for each instructional topic within each six-week period.

TAKS	TEKS	**DAYS	INSTRUCTIONAL TOPIC	RESOURCES	LABORATORY INVESTIGATIONS AND ACTIVITIES
1 & 5	*1AB 2ABCD 3ABCDE 4A	(2)	Laboratory Investigations and Inquiry Process	<a href="#">Sample Safety Contract</a> <a href="#">Lab Safety/ Scientific Method Materials</a> <a href="#">Lab Safety</a> <a href="#">Lab Safety Carnegie Institution</a> <a href="#">40 Steps for Lab Safety</a> <a href="#">Scientific Methods Notes</a> <a href="#">Scientific Methods Lecture Notes</a> <a href="#">Scientific Methods</a>	
1 & 4	2B	(4)	Measurement of Matter	<a href="#">Measurement</a> <a href="#">Metric System</a>	
1 & 4	7E	(3)	Classifying Matter	<a href="#">Free Lessons and Activities- Chemfiesta</a> <a href="#">Lesson Plan on Matter Classification</a> <a href="#">Classifying Matter Information</a> <a href="#">Chemistry Tutorial</a> <a href="#">Physical and Chemical Property Changes</a>	
1 & 4	8AC	(3)	Phases of Matter	<a href="#">Phases of Matter Information</a> <a href="#">Atomic Structure Notes</a> <a href="#">Phase Change Diagrams</a> <a href="#">Animated Phase Change Diagrams</a> <a href="#">Matter Classification</a>	
1 & 4	8A 7A	(2)	Properties of Solids	<a href="#">Comparison of Molecular Structure in a Solid</a> <a href="#">Animated Phase Change Diagrams</a>	

**First Six Weeks (Continued)**

<b>First Six Weeks (Continued)</b>					
<b>TAKS</b>	<b><a href="#">TEKS</a></b>	<b>**DAYS</b>	<b>INSTRUCTIONAL TOPIC</b>	<b>RESOURCES</b>	<b>LABORATORY INVESTIGATIONS AND ACTIVITIES</b>
1 & 4	7A	(3)	Properties of Fluids	<a href="#">Liquid Density Activity</a>	
1 & 4	9E 7BC	(6)	Atomic Structure	<a href="#">Atom Tutorial</a> <a href="#">Atomic Name Activity</a> <a href="#">Famous Scientists</a> <a href="#">History of the Atom Tutorial</a> <a href="#">Subatomic Particles Tutorial</a> <a href="#">The Particle Adventure</a> <a href="#">Atomic Structure Timeline</a> <a href="#">Atom Tour</a> <a href="#">Atomic Structure Notes</a> <a href="#">Atomic Structure Notes/Diagrams</a> <a href="#">A Brief History of the Atom</a> <a href="#">Mendeleev Biography</a> <a href="#">Atomic Structure Notes</a>	

		[27]	<b>Second Six Weeks</b> <i><b>Laboratory Investigation and Inquiry Process are applied to all instruction, assessment and learning processes. TEKS 1AB, 2ABCD, 3ABCDE</b></i>		
TAKS	<a href="#">TEKS</a>	**DAYS	INSTRUCTIONAL TOPIC	RESOURCES	LABORATORY INVESTIGATIONS AND ACTIVITIES
1 & 4	7D	(8)	Periodic Table	<a href="#">Interactive Periodic Table</a> <a href="#">Interactive Periodic Table (plus more links)</a> <a href="#">Los Alamos National Laboratory Periodic Table</a> <a href="#">How to Interpret Periodic Table</a> <a href="#">Periodic Chart</a> <a href="#">Elements</a>  <a href="#">Lessons and Activities about Periodic Table and Elements</a>	
1 & 4	7D	(3)	Chemical Bonding (covalent and ionic bonds)	<a href="#">Interactive Periodic Table and Element Information</a> <a href="#">Lessons and Activities about Elements and Bonding</a>	
1 & 4	8C	(8)	Law of Conservation of Mass (Balancing chemical equations)	<a href="#">Conservation of Mass Information</a> <a href="#">Balancing Reactions</a> <a href="#">Conservation of Mass</a> <a href="#">Chemical Reactions Notes</a> <a href="#">ChemTutor Reactions</a> <a href="#">Chemical Reactions</a> <a href="#">Balancing Chemical Reactions</a> <a href="#">Chemical Reaction Interactive Slide Show</a>	
1 & 4	8A	(3)	Physical and Chemical Changes	<a href="#">Brief Info on Chemical Changes</a> <a href="#">Physical and Chemical Property Changes</a>	
1 & 4	8BE	(5)	Chemical Reactions (endothermic, exothermic reactions)	<a href="#">Lab Activity</a>	

		[26]	<b>Third Six Weeks</b> <i><u>Laboratory Investigation and Inquiry Process are applied to all instruction, assessment and learning processes. TEKS 1AB, 2ABCD, 3ABCDE</u></i>		
TAKS	<a href="#">TEKS</a>	**DAYS	INSTRUCTIONAL TOPIC	RESOURCES	LABORATORY INVESTIGATIONS AND ACTIVITIES
1 & 4	9BDE	(5)	Solutions and Solubility (Factors influencing solubility)	<a href="#">Compilation of Solutions Tutorials</a> <a href="#">Solubility Tutorial</a>	
1 & 4	9A	(5)	Structure and Function of Water, Universal Solvent	<a href="#">Water Science</a> <a href="#">Water Structure and Behavior</a> <a href="#">Oceans Online</a> <a href="#">Hydrogen Bonds</a> <a href="#">Water and Hydrogen Bonding</a> <a href="#">Snowglobe (brass alloy activity)</a>	
1 & 4	9BDE	(4)	Concentration of Ions in Solutions (pH, acid rain)	<a href="#">Interactive pH Lesson</a> <a href="#">Acids and Bases</a> <a href="#">ChemTutor- Acids</a> <a href="#">Acids and Bases Information</a> <a href="#">Acids and Bases</a>	
1 & 4	6E	(3)	Measuring Thermal and Electrical Conductivity (Specific Heat)	<a href="#">Heat and Thermodynamics Lesson Plan and Activities</a> <a href="#">Kinetic Molecular Theory Tutorial</a> <a href="#">Molecules in Motion Interactive Animation</a> <a href="#">Specific Heat Tutorial with Problems</a> <a href="#">Specific Heat Tutorial (NASA)</a> <a href="#">Conduction, Convection, and Radiation Lesson Plan</a> <a href="#">Transmission of Heat Lesson</a>	
1 & 4	6ABEH	(6)	Law of Conservation of Energy (Measurement of Heat)	<a href="#">Lesson/Lab for Heat and Temp using a Glowstick</a>	
1 & 4	8D	(3)	Types of Nuclear Reactions (Fission, Fusion)	<a href="#">Nuclear Reactions (Decay) Information</a> <a href="#">Fission</a> <a href="#">Nuclear Structure Information</a> <a href="#">Fusion vs. Fission</a> <a href="#">Half-life</a>	

## SECOND SEMESTER

SECOND SEMESTER					
		[29]	<b>Fourth Six Weeks</b> <u>Laboratory Investigation and Inquiry Process are applied to all instruction, assessment and learning processes. TEKS 1AB, 2ABCD, 3ABCDE</u>		
TAKS	<a href="#">TEKS</a>	**DAYS	INSTRUCTIONAL TOPIC	RESOURCES	LABORATORY INVESTIGATIONS AND ACTIVITIES
1	1AB 2ABCD 3ABCDE 4A	(2)	Laboratory Investigations and Inquiry Process	<a href="#">Sample Safety Contract</a> <a href="#">Lab Safety/ Scientific Method Materials</a> <a href="#">Sample Safety Contract</a> <a href="#">Lab Safety</a> <a href="#">Lab Safety Carnegie Institution</a> <a href="#">40 Steps for Lab Safety</a> <a href="#">Scientific Methods Notes</a> <a href="#">Scientific Methods Lecture Notes</a> <a href="#">Scientific Methods</a>	
1 & 4	2B	(4)	Measurement of Matter	<a href="#">Measurement</a> <a href="#">Metric System</a>	
1 & 4	7E	(3)	Classifying Matter	<a href="#">Free Lessons and Activities- Chemfiesta</a> <a href="#">Lesson Plan on Matter Classification</a> <a href="#">Classifying Matter Information</a> <a href="#">Chemistry Tutorial</a> <a href="#">Physical and Chemical Property Changes</a>	
1 & 4	8AC	(3)	Phases of Matter	<a href="#">Phases of Matter Information</a> <a href="#">Atomic Structure Notes</a> <a href="#">Phase Change Diagrams</a> <a href="#">Animated Phase Change Diagrams</a> <a href="#">Matter Classification</a>	

			Fourth Six Weeks (Continued)		
TAKS	TEKS	**DAYS	INSTRUCTIONAL TOPIC	RESOURCES	LABORATORY INVESTIGATIONS AND ACTIVITIES
1 & 4	8A 7A	(2)	Properties of Solids	<a href="#">Comparison of Molecular Structure in a Solid</a> <a href="#">Animated Phase Change Diagrams</a>	
1 & 4	7A	(3)	Properties of Fluids	<a href="#">Liquid Density Activity</a>	
1 & 4	9E 7BC	(7)	Atomic Structure	<a href="#">Atom Tutorial</a> <a href="#">Atomic Name Activity</a> <a href="#">Famous Scientists</a> <a href="#">History of the Atom Tutorial</a> <a href="#">Subatomic Particles Tutorial</a> <a href="#">The Particle Adventure</a> <a href="#">Atomic Structure Timeline</a> <a href="#">Atom Tour</a> <a href="#">Atomic Structure Notes</a> <a href="#">Atomic Structure Notes/Diagrams</a> <a href="#">A Brief History of the Atom</a> <a href="#">Mendeleev Biography</a> <a href="#">Atomic Structure Notes</a>	

		[24]	<b>Fifth Six Weeks</b> <i><u>Laboratory Investigation and Inquiry Process are applied to all instruction, assessment and learning processes. TEKS 1AB, 2ABCD, 3ABCDE</u></i>		
TAKS	<a href="#">TEKS</a>	**DAYS	INSTRUCTIONAL TOPIC	RESOURCES	LABORATORY INVESTIGATIONS AND ACTIVITIES
1 & 4	7D	(5)	Periodic Table	<a href="#">Lessons and Activities about Periodic Table and Elements</a> <a href="#">Interactive Periodic Table</a> <a href="#">Interactive Periodic Table (plus more links)</a> <a href="#">Los Alamos National Laboratory Periodic Table</a> <a href="#">How to Interpret Periodic Table</a> <a href="#">Periodic Chart</a> <a href="#">Elements</a>	
1 & 4	7D	(3)	Chemical Bonding (covalent and ionic bonds)	<a href="#">Interactive Periodic Table and Element Information</a> <a href="#">Lessons and Activities about Elements and Bonding</a>	
1 & 4	8C	(9)	Law of Conservation of Mass (Balancing chemical equations)	<a href="#">Conservation of Mass Information</a> <a href="#">Balancing Reactions</a> <a href="#">Conservation of Mass</a> <a href="#">Chemical Reactions Notes</a> <a href="#">ChemTutor Reactions</a> <a href="#">Chemical Reactions</a> <a href="#">Balancing Chemical Reactions</a> <a href="#">Chemical Reaction Interactive Slide Show</a>	
1 & 4	8A	(2)	Physical and Chemical Changes	<a href="#">Brief Info on Chemical Changes</a> <a href="#">Physical and Chemical Property Changes</a>	
1 & 4	8BE	(5)	Chemical Reactions (endothermic, exothermic reactions)	<a href="#">Lab Activity</a>	

		[33*]	<b>Sixth Six Weeks</b> <i><b>Laboratory Investigation and Inquiry Process are applied to all instruction, assessment and learning processes. TEKS 1AB, 2ABCD, 3ABCDE</b></i> <b>*Please consider, that the total number of instructional days for second semester does not reflect the five days allocated for TAKS Testing nor the number of days a campus may use for TAKS review.</b>		
TAKS	TEKS	**DAYS	INSTRUCTIONAL TOPIC	RESOURCES	LABORATORY INVESTIGATIONS AND ACTIVITIES
1 & 4	9BDE	(4)	Solutions and Solubility (Factors influencing solubility)	<a href="#">Compilation of Solutions Tutorials</a> <a href="#">Solubility Tutorial</a>	
1 & 4	9A	(5)	Structure and Function of Water, Universal Solvent	<a href="#">Water Science</a> <a href="#">Water Structure and Behavior</a> <a href="#">Oceans Online</a> <a href="#">Hydrogen Bonds</a> <a href="#">Water and Hydrogen Bonding</a> <a href="#">Snowglobe (brass alloy activity)</a>	
1 & 4	9BDE	(3)	Concentration of Ions in Solutions (pH, acid rain)	<a href="#">Interactive pH Lesson</a> <a href="#">Acids and Bases</a> <a href="#">ChemTutor- Acids</a> <a href="#">Acids and Bases Information</a> <a href="#">Acids and Bases</a>	
1 & 4	6E	(4)	Measuring Thermal and Electrical Conductivity (Specific Heat)	<a href="#">Heat and Thermodynamics Lesson Plan and Activities</a> <a href="#">Kinetic Molecular Theory Tutorial</a> <a href="#">Molecules in Motion Interactive Animation</a> <a href="#">Specific Heat Tutorial with Problems</a> <a href="#">Specific Heat Tutorial (NASA)</a> <a href="#">Conduction, Convection, and Radiation Lesson Plan</a> <a href="#">Transmission of Heat Lesson</a>	
1 & 4	6ABEH	(6)	Law of Conservation of Energy (Measurement of Heat)	<a href="#">Lesson/Lab for Heat and Temp using a Glowstick</a>	
1 & 4	8D	(3)	Types of Nuclear Reactions (Fission, Fusion)	<a href="#">Nuclear Reactions (Decay) Information</a> <a href="#">Fission</a> <a href="#">Nuclear Structure Information</a> <a href="#">Fusion vs. Fission</a> <a href="#">Half-life</a>	

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