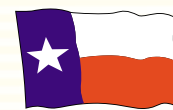


Correlation to Grade 8 Science TEKS and TAKS

Knowledge and Skills	Glencoe Texas Science Student Edition (by pages)	TAKS Grade 10 and Grade 11 Exit Level Science
TEKS 8.1: <i>Scientific processes</i> The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:		
(A) demonstrate safe practices during field and laboratory investigations; and	5, 20, 21, 79–81, 89, 92, 107, 108, 109, 121, 132, 135, 139, 144, 145, 153, 157, 171, 176, 177, 189, 196, 198, 204, 217, 219, 223, 236, 237, 247, 254, 260, 266, 267, 289, 303, 305, 314, 319, 326, 327, 348, 356, 357, 431, 443, 450, 451, 459, 477, 481, 509–511, 519, 525, 529, 532, 542, 561, 567, 572, 581, 590, 593, 598, 616, 620, 626, 627, 642, 655, 660, 675, 694, 695, 703, 713, 726, 780, 788	TAKS Objective 1 The student will demonstrate an understanding of the nature of science.
(B) make wise choices in the use and conservation of resources and the disposal or recycling of materials.	18, 20, 21, 79–81, 236, 237, 348, 567, 569, 581, 616, 627, 784	
TEKS 8.2: <i>Scientific processes</i> The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:		
(A) plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology;	10, 17, 18, 20, 21, 24, 27, 37, 40, 44, 50, 51, 59, 64, 73, 79–81, 89, 95, 99, 107–109, 115, 121, 131, 133, 144, 145, 151, 153, 162, 165, 170, 176, 177, 179, 185, 189, 196, 204, 211, 219, 222, 223, 232, 234, 236, 237, 245, 256, 272, 275, 278, 283, 286, 294, 309, 315, 319, 325–327, 342, 348–350, 354, 359, 369, 372, 380, 386, 406, 411, 418, 425, 449–451, 457, 469, 472, 478, 480, 481, 489, 497, 508, 517, 519, 525, 529, 532–534, 538, 541–543, 545, 566, 567, 572, 573, 579, 588–590, 594, 598, 604, 605, 610, 616, 620, 624, 626, 627, 633, 643, 645, 647, 649, 655, 660, 663, 667, 669, 675, 680, 681, 684, 687, 692–695, 701, 703, 708, 711, 726–728, 733	TAKS Objective 1 The student will demonstrate an understanding of the nature of science.
(B) collect data by observing and measuring; <i>(continued)</i>	4, 5, 11, 14, 19–21, 24, 27, 29, 37, 40, 44, 50, 51, 59, 61, 79–81, 89, 92, 104, 107–109, 121, 132, 135, 139, 142, 144, 145, 153, 157, 171, 176, 177, 179, 185, 189, 196, 198, 205, 217, 219, 222, 223,	



Knowledge and Skills	<i>Glencoe Texas Science Student Edition (by pages)</i>	TAKS Grade 10 and Grade 11 Exit Level Science
TEKS 8.2 (<i>continued</i>)	228, 236, 237, 245, 253, 254, 260, 266, 267, 273, 275–277, 283, 286, 289, 294, 295, 301, 303, 305, 314, 319, 326, 327, 333, 339, 342, 344, 345, 348, 350, 356, 357, 365, 367, 380, 386, 395, 406, 411, 416, 431, 436, 437, 440, 443, 450, 451, 457, 459, 462, 473, 477, 479–481, 486, 489, 491, 499, 509–511, 517, 519, 525, 529, 532, 542, 543, 555, 561, 567, 569, 572, 573, 581, 590, 593, 595, 598, 605, 607, 616, 618, 620, 626, 627, 632, 633, 639, 642, 647, 655, 661, 669, 675, 679, 684, 694, 695, 701, 703, 705, 707, 712, 713, 722, 726, 727, 732, 768, 772, 776, 780, 784, 788	TAKS Objective 1 The student will demonstrate an understanding of the nature of science.
(C) organize, analyze, evaluate, make inferences, and predict trends from direct and indirect evidence;	5, 6, 11, 14, 18, 19, 24, 26, 27, 37, 40, 51, 59, 61, 73, 79–81, 87, 92, 104, 108, 109, 114, 115, 121, 125, 126, 131, 133, 135, 139, 144, 145, 148, 149, 151, 153, 157, 162, 163, 165, 170, 171, 175, 179–183, 185, 189, 195, 196, 198, 205, 211, 217, 219, 222, 223, 228, 232, 234–237, 242, 243, 245, 247, 253, 254, 266, 267, 275, 277, 283, 289, 293–295, 301, 303, 305, 314, 319, 327, 332, 342, 348, 354, 359, 367, 379, 380, 413, 419, 425, 431, 437, 451, 473, 483, 489, 491, 499, 509–511, 517, 519, 525, 529, 532, 542, 543, 549, 559, 567, 569, 571–573, 581, 589, 590, 593, 595, 597, 599, 602, 605, 607, 616, 618, 620, 626, 627, 641–643, 645, 647, 651, 653, 654, 657, 660, 661, 675, 681, 684, 694, 695, 701, 705, 712, 713, 722, 726, 727, 732, 733, 772, 780	
(D) communicate valid conclusions; and (<i>continued</i>)	4, 5, 10, 11, 14, 18, 19, 22–27, 29, 37, 40, 45, 49, 51, 59, 61, 64, 79–81, 89, 92, 95, 101, 104, 107–109, 115, 121, 125, 126, 131, 132, 134, 135, 139, 143, 145, 148, 149, 151, 153, 157, 159, 161–163, 165, 170, 171, 175, 179–183, 185, 189, 196, 198, 203, 205, 217, 219, 222, 223, 228, 232, 234–237, 240–243, 249, 254, 266, 267, 277, 286, 289, 295, 303, 305, 312, 315, 319, 326, 327, 333, 342, 344, 348, 354, 359, 365, 373, 375, 380, 386, 395,	

Correlation to Grade 8 Science TEKS and TAKS *continued*

Knowledge and Skills	Glencoe Texas Science Student Edition (by pages)	TAKS Grade 10 and Grade 11 Exit Level Science
TEKS 8.2 (<i>continued</i>)	403, 406, 408, 411, 413, 416, 418, 419, 424, 431, 436, 437, 439, 440, 451, 457, 462, 477, 479– 481, 483, 489, 491, 497, 499, 509–511, 519, 525, 527, 529, 530, 532, 533, 541, 543, 549, 555, 557, 561, 567, 569, 571–573, 581, 589, 590, 593, 595, 597, 599, 602, 605, 607, 610, 616, 618, 620, 624–627, 642, 643, 645, 647, 653–655, 660, 661, 675, 679, 681, 684, 693– 695, 703, 705, 708, 711–713, 719, 722, 725, 727, 729, 780, 788	TAKS Objective 1 The student will demonstrate an understanding of the nature of science.
(E) construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data.	18, 24, 27, 39, 40, 44, 49, 51, 55, 57, 61, 66, 76, 80, 81, 85, 87, 99, 113, 115, 124–126, 134, 135, 145, 148–151, 170, 179, 183, 190, 195, 196, 198, 205, 207, 209, 222, 228, 241, 243, 249, 253, 254, 258, 265, 267, 271, 273, 282, 283, 286, 293, 295, 299, 301, 312, 325, 327, 331–333, 361, 373, 379, 380, 385, 391, 393, 410, 420, 421, 423, 440, 444, 449–451, 453, 455, 467, 475, 478, 485, 487, 509–511, 513, 515, 517, 523, 525, 538, 541, 545, 547, 555, 566, 569, 572, 573, 577, 579, 589, 599, 601, 603, 605, 615, 627, 629, 631, 632, 645, 649, 655, 659, 661, 663, 665, 667, 674, 694, 695, 699, 701, 708, 713, 722, 731, 772, 776, 784	
TEKS 8.3: Scientific processes The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:		
(A) analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information;	7, 15, 22, 23, 40, 60, 61, 64, 65, 68–77, 84, 85, 144, 145, 161, 169, 176, 177, 279, 342, 344, 350, 351, 353, 355–357, 362, 363, 380, 410, 597, 660, 661, 674, 679	TAKS Objective 1 The student will demonstrate an understanding of the nature of science.
(B) draw inferences based on data related to promotional materials for products and services;	19, 24, 26, 104, 115, 437, 440	TAKS Objective 3 The student will demonstrate an understanding of the interdependence of organisms and the environment.
(C) represent the natural world using models and identify their limitations;	5, 10, 25, 27, 29, 37, 39, 40, 49, 50, 59, 60, 61, 176, 177, 188, 247, 278, 303, 305, 315, 320, 321, 332, 339, 365, 380, 386, 387, 395, 406, 411, 425, 491, 499, 508, 509, 519, 520, 529, 532, 542, 543, 555, 581, 607, 620, 633, 647, 655, 657, 661, 666, 669, 675, 684, 694, 695, 703, 722, 726, 727, 776	
(D) evaluate the impact of research on scientific thought, society, and the environment; and	6–10, 30–36, 38, 39, 54, 56, 57, 60, 61, 87, 142, 148, 276, 277, 279, 281, 298, 339, 399, 512, 513, 654, 714, 723	
(E) connect Grade 8 science concepts with the history of science and contributions of scientists.	8, 9, 54, 56, 57, 76, 80, 81, 138, 141, 160, 161, 163, 233, 399, 512, 513, 640, 645, 656–659, 664, 666, 674	



Knowledge and Skills	Glencoe Texas Science Student Edition (by pages)	TAKS Grade 10 and Grade 11 Exit Level Science
TEKS 8.4: <i>Scientific processes</i> The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:		
(A) collect, record, and analyze information using tools including beakers, petri dishes, metersticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices; and	15, 61, 79–81, 92, 135, 145, 157, 171, 185, 196, 205, 217, 223, 236, 237, 266, 267, 283, 289, 295, 327, 345, 348, 350, 351, 353, 356, 357, 416, 431, 437, 440, 443, 450, 451, 457, 462, 477, 479, 480, 481, 491, 509–511, 519, 525, 529, 567, 572, 573, 581, 590, 593, 598, 616, 620, 626, 627, 647, 675, 693, 701, 703, 713, 726, 727	TAKS Objective 1 The student will demonstrate an understanding of the nature of science.
(B) extrapolate from collected information to make predictions.	106, 145, 153, 157, 171, 204, 205, 237, 295, 348, 355, 362, 363, 367, 431, 567, 572, 573, 581, 590, 626, 627, 654, 666, 713, 780	
TEKS 8.5: <i>Scientific processes</i> The student knows that relationships exist between science and technology. The student is expected to:		
(A) identify a design problem and propose a solution;	51, 108, 109, 144, 145, 204, 236, 286, 294, 311, 312, 386, 387, 418, 480, 481, 542, 589, 598, 653, 726, 727	TAKS Objective 1 The student will demonstrate an understanding of the nature of science.
(B) design and test a model to solve the problem; and	40, 50, 51, 108, 109, 144, 145, 176, 177, 286, 386, 387, 411, 419, 480, 481, 542, 589, 653, 726, 727	
(C) evaluate the model and make recommendations for improving the model.	40, 50, 51, 144, 145, 411, 419, 480, 481, 589, 694, 695, 726, 727	
TEKS 8.6: <i>Science concepts</i> The student knows that interdependence occurs among living systems. The student is expected to:		
(A) describe interactions among systems in the human organism;	80, 81, 143, 574, 595, 606–633	TAKS Objective 2 The student will demonstrate an understanding of the organization of living systems. TAKS Objective 3 The student will demonstrate an understanding of the interdependence of organisms and the environment.
(B) identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions; and	617, 623–625, 630–633	
(C) describe interactions within ecosystems.	80–82, 120, 121, 356, 360–363, 372, 518, 520, 522–524, 530, 535–541, 546–549, 556, 561, 564, 565, 570, 576–579, 582–594, 596, 597, 599–601, 604	

Correlation to Grade 8 Science TEKS and TAKS *continued*

Knowledge and Skills	Glencoe Texas Science Student Edition (by pages)	TAKS Grade 10 and Grade 11 Exit Level Science
TEKS 8.7: Science concepts The student knows that there is a relationship between force and motion. The student is expected to:		
(A) demonstrate how unbalanced forces cause changes in the speed or direction of an object's motion; and	137, 153, 160–183, 189, 192, 196–201, 203, 205, 208–211, 280, 304–312, 320–325, 330–333, 526–534, 548, 642, 651	TAKS Objective 5 The student will demonstrate an understanding of motion, forces, and energy.
(B) recognize that waves are generated and can travel through different media.	184–211, 280, 304, 306–312, 324, 326, 330, 518, 520, 526, 527, 531, 532, 534, 537, 546, 547, 651	
TEKS 8.8: Science concepts The student knows that matter is composed of atoms. The student is expected to:		
(A) describe the structure and parts of an atom; and	33–51, 54–57, 77, 122, 123, 128, 381, 392	TAKS Objective 4 The student will demonstrate an understanding of the structures and properties of matter.
(B) identify the properties of an atom including mass and electrical charge.	33–57, 77, 381–385, 390, 391, 715–718	
TEKS 8.9: Science concepts The student knows that substances have chemical and physical properties. The student is expected to:		
(A) demonstrate that substances may react chemically to form new substances;	47, 68–79, 84–101, 106, 107, 110–115, 146, 147, 221–223, 229, 232, 233, 319, 381–385, 390, 391, 438, 439, 522, 523, 592–594, 596, 597, 602, 603, 768–771	TAKS Objective 4 The student will demonstrate an understanding of the structures and properties of matter.
(B) interpret information on the periodic table to understand that physical properties are used to group elements;	47, 58–79, 83–87	
(C) recognize the importance of formulas and equations to express what happens in a chemical reaction; and	92–97, 99, 106–107, 114	
(D) identify that physical and chemical properties influence the development and application of everyday materials such as cooking surfaces, insulation, adhesives, and plastics.	68, 74–76, 78, 80, 81, 84, 86, 88, 95, 105, 111, 124, 147, 217, 218, 222, 232–235, 240, 243, 608	



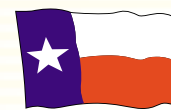
Knowledge and Skills	Glencoe Texas Science Student Edition (by pages)	TAKS Grade 10 and Grade 11 Exit Level Science
TEKS 8.10: Science concepts The student knows that complex interactions occur between matter and energy. The student is expected to:		
(A) illustrate interactions between matter and energy including specific heat;	96–101, 103, 112, 114, 129, 132–135, 150, 186–211, 309, 316, 317, 319, 330, 332, 333, 430, 432, 433, 435, 442, 444–451, 453–457, 460, 461, 484–487, 496, 497, 514–517, 527	TAKS Objective 4 The student will demonstrate an understanding of the structures and properties of matter.
(B) describe interactions among solar, weather, and ocean systems; and	133, 135, 434–438, 441–449, 452–481, 484–487, 490–495, 498–511, 514–518, 521, 523–527, 530–534, 544–548, 592, 709–713, 780–783	TAKS Objective 5 The student will demonstrate an understanding of motion, forces, and energy.
(C) identify and demonstrate that loss or gain of heat energy occurs during exothermic and endothermic chemical reactions.	97–99, 102–105, 108, 109, 112, 113, 322, 709	
TEKS 8.11: Science concepts The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:		
(A) identify that change in environmental conditions can affect the survival of individuals and of species;	340–343, 354, 355, 360–363, 394, 396–402, 405–408, 410–412, 414, 417, 422–425, 432, 496, 497, 499, 503, 515, 582–584, 586–589, 777–779	TAKS Objective 2 The student will demonstrate an understanding of the organization of living systems.
(B) distinguish between inherited traits and other characteristics that result from interactions with the environment; and	340, 341, 343, 354, 355, 360–363, 398–400, 402, 413, 422–425	TAKS Objective 3 The student will demonstrate an understanding of the interdependence of organisms and the environment.
(C) make predictions about possible outcomes of various genetic combinations of inherited characteristics.	346–349, 360–363	
TEKS 8.12: Science concepts The student knows that cycles exist in Earth systems. The student is expected to:		
(A) analyze and predict the sequence of events in the lunar and rock cycles;	244–265, 268–274, 280–282, 284, 285, 298–301, 364–393, 404, 405, 638, 639, 646–657, 659, 662–667	Content on these pages may be integrated with TAKS Objective 4.
(B) relate the role of oceans to climatic changes; and	491–493, 499, 514–517, 521, 524, 526–530, 546, 548	
(C) predict the results of modifying the Earth's nitrogen, water, and carbon cycles.	430, 438, 454, 514–517, 521, 522, 541, 546, 562, 582, 583, 596, 597, 602, 604	

Correlation to Grade 8 **Science TEKS and TAKS** *continued*

Knowledge and Skills	<i>Glencoe Texas Science Student Edition (by pages)</i>	TAKS Grade 10 and Grade 11 Exit Level Science
TEKS 8.13: <i>Science concepts</i> The student knows characteristics of the universe. The student is expected to:		
(A) describe characteristics of the universe such as stars and galaxies;	641, 643, 644, 651, 652, 659, 664–667, 672, 673, 676–678, 680–733, 788–791	Content on these pages may be integrated with TAKS Objective 5.
(B) explain the use of light years to describe distances in the universe; and	702, 706, 707, 720–722, 726, 727, 730–733	
(C) research and describe historical scientific theories of the origin of the universe.	358, 670–672, 674, 702, 707, 719, 722–725, 730–733	
TEKS 8.14: <i>Scientific processes</i> The student knows that natural events and human activities can alter Earth systems. The student is expected to:		
(A) predict land features resulting from gradual changes such as mountain building, beach erosion, land subsidence, and continental drift;	249, 250, 257, 274, 276–288, 290–293, 296–301, 313, 316–333, 351, 403, 409, 410, 412, 416, 422, 534, 542, 543, 546, 547, 773–775	TAKS Objective 3 The student will demonstrate an understanding of the interdependence of organisms and the environment.
(B) analyze how natural or human events may have contributed to the extinction of some species; and	356, 360, 361, 396, 397, 403, 404, 406, 407, 410, 412, 413, 415, 417–425	
(C) describe how human activities have modified soil, water, and air quality.	80, 81, 83, 433, 438, 439, 454–457, 505, 516, 517, 554, 556–571, 574–589, 591–598, 600–605, 784–787	

Correlation of Science TEKS and TAKS

to Glencoe Texas Science Grade 8



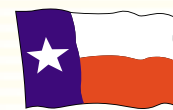
by Chapter/Section and Program Content

Contents	Student Edition		
	Pages	TEKS	TAKS Grade 10 and Grade 11 Exit Level Science
Unit 1 Chemical Interactions			
Chapter 1 The Nature of Science			
		8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3B, 8.3C	
Section 1 How Science Works	6–11	8.2A, 8.2B, 8.2C, 8.2D, 8.3, 8.3A, 8.3C, 8.3D, 8.3E	TAKS Objective 1: The student will demonstrate an understanding of the nature of science.
Section 2 Scientific Problem Solving	12–18	8.1B, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3, 8.3A, 8.4A	
Activity: Advertising Inferences	19	8.2B, 8.2C, 8.2D, 8.3, 8.3B	
Activity: Model an Archaeological Dig	20–21	8.1A, 8.1B, 8.2A, 8.2B	
Science and Language Arts: Mama Solves a Murder	22–23	8.2D, 8.3A	
Chapter Study Guide	24–25	8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3B, 8.3C	
Chapter Assessment	26–27	8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3B, 8.3C	
Chapter 2 Inside the Atom			
		8.8A, 8.8B	
Section 1 Models of the Atom	30–39	8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3, 8.3C, 8.3D, 8.8, 8.8A, 8.8B	TAKS Objective 4: The student will demonstrate an understanding of the structures and properties of matter.
Activity: Making a Model of the Invisible	40	8.1, 8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3A, 8.3C, 8.4, 8.5, 8.5B, 8.5C, 8.8, 8.8A, 8.8B	
Section 2 The Nucleus	41–49	8.2, 8.2A, 8.2B, 8.2D, 8.2E, 8.3, 8.3C, 8.8, 8.8A, 8.8B, 8.9, 8.9A, 8.9B, 8.14	
Activity: Half-Life	50–51	8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3C, 8.5, 8.5A, 8.5B, 8.5C, 8.8, 8.8A, 8.8B	
Science and Society: Food for Thought	52–53	8.8, 8.8B	
Chapter Study Guide	54–55	8.2E, 8.3E, 8.8, 8.8A, 8.8B	
Chapter Assessment	56–57	8.2E, 8.3, 8.3D, 8.3E, 8.8, 8.8A, 8.8B	
Chapter 3 The Periodic Table			
Section 1 Introduction to the Periodic Table	60–66	8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3, 8.3A, 8.3C, 8.3D, 8.4A, 8.9, 8.9B	TAKS Objective 4: The student will demonstrate an understanding of the structures and properties of matter.
Section 2 Representative Elements	67–73	8.2A, 8.2C, 8.3, 8.3A, 8.6A, 8.9, 8.9A, 8.9B, 8.9D	
Section 3 Transition Elements	74–78	8.1B, 8.2E, 8.3, 8.3A, 8.3E, 8.8A, 8.8B, 8.9, 8.9A, 8.9B, 8.9D	

TAKS The content and process skills in Glencoe Texas Science support your efforts to prepare students for future TAKS examinations in science, reading, and mathematics.

Correlation of Science TEKS and TAKS to Glencoe Science Grade 8 *continued*

Contents	Student Edition		
	Pages	TEKS	TAKS Grade 10 and Grade 11 Exit Level Science
Activity: Preparing a Mixture	79	8.1A, 8.1B, 8.2A, 8.2B, 8.2C, 8.2D, 8.4A, 8.9A, 8.9B	TAKS Objective 4: The student will demonstrate an understanding of the structures and properties of matter.
Activity: Health Risks from Heavy Metals	80–81	8.1A, 8.1B, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3, 8.3E, 8.4A, 8.6A, 8.6C, 8.9D, 8.14C	
Science and Language Arts: Anansi Tries to Steal All the Wisdom in the World	82–83	8.6C, 8.9B, 8.14C	
Chapter Study Guide	84–85	8.2E, 8.3A, 8.9A, 8.9B, 8.9D	
Chapter Assessment	86–87	8.2C, 8.2E, 8.3, 8.3D, 8.9A, 8.9B, 8.9D	
Chapter 4 Chemical Reactions		8.9A, 8.9C, 8.10C	
Section 1 Chemical Formulas and Equations	90–99	8.1A, 8.2A, 8.2B, 8.2C, 8.2D, 8.3, 8.4A, 8.8, 8.8A, 8.9, 8.9A, 8.9C, 8.9D, 8.10, 8.10A, 8.10C	TAKS Objective 4: The student will demonstrate an understanding of the structures and properties of matter.
Section 2 Rates of Chemical Reactions	100–106	8.2B, 8.2C, 8.2D, 8.3, 8.3B, 8.4B, 8.9A, 8.9C, 8.9D, 8.10, 8.10A, 8.10C	
Activity: Comparing Metals	107	8.1A, 8.2A, 8.2B, 8.2D, 8.9A, 8.9C	
Activity: Exothermic or endothermic?	108–109	8.1A, 8.2A, 8.2B, 8.2C, 8.2D, 8.5A, 8.5B, 8.10C	
Science and History: Synthetic Diamonds	110–111	8.9A, 8.9D	
Chapter Study Guide	112–113	8.2E, 8.9A, 8.10, 8.10A, 8.10C	
Chapter Assessment	114–115	8.2A, 8.2C, 8.2D, 8.2E, 8.3, 8.3B, 8.9A, 8.9C, 8.10A	
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Section 1 Matter	122–126	8.2, 8.2C, 8.2D, 8.2E, 8.3, 8.8, 8.9, 8.9D	TAKS Objective 4: The student will demonstrate an understanding of the structures and properties of matter.
Section 2 Changes of State	127–134	8.1A, 8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3, 8.8, 8.8A, 8.9, 8.10, 8.10A, 8.10B	
Activity: A Spin Around the Water Cycle	135	8.1A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3, 8.4A, 8.10A, 8.10B, 8.12	
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Activity: Design Your Own Ship	144–145	8.1A, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3A, 8.4A, 8.4B, 8.5A, 8.5B, 8.5C	



Contents	Student Edition		
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Activity: Planetary Orbits	675	8.1, 8.1A, 8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.3C, 8.4, 8.4A	



Contents	Student Edition		
	Pages	TEKS	TAKS Grade 10 and Grade 11 Exit Level Science
Section 2 The Inner Planets	676–681	8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.3, 8.3A, 8.13, 8.13A	Content on these pages may be integrated with TAKS Objective 1.
Section 3 The Outer Planets	682–689	8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.3, 8.3C, 8.13, 8.13A	
Section 4 Other Objects in the Solar System	690–693	8.2, 8.2A, 8.2D, 8.3, 8.4A, 8.13, 8.13A	
Activity: Solar System Distance Model	694–695	8.1, 8.1A, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3C, 8.5C, 8.13, 8.13A	
Oops! Accidents in Science: It Came from Outer Space!	696–697	8.13, 8.13A	
Chapter Study Guide	698–699	8.2E, 8.13, 8.13A	
Chapter Assessment	700–701	8.2A, 8.2B, 8.2C, 8.2E, 8.3, 8.4A, 8.13, 8.13A	
Chapter 24 Stars and Galaxies		8.13A, 8.13B, 8.13C	
Section 1 Stars	704–708	8.1, 8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3, 8.13, 8.13A, 8.13B, 8.13C	Content on these pages may be integrated with TAKS Objective 5.
Section 2 The Sun	709–712	8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.3, 8.10B, 8.10C, 8.13, 8.13A	
Activity: Sunspots	713	8.1A, 8.2B, 8.2C, 8.2D, 8.2E, 8.4A, 8.4B, 8.10B, 8.13A	
Section 3 Evolution of Stars	714–719	8.2D, 8.3, 8.3D, 8.8A, 8.8B, 8.13, 8.13A, 8.13C	
Section 4 Galaxies and the Universe	720–725	8.2, 8.2A, 8.2B, 8.2C, 8.2D, 8.2E, 8.3, 8.3C, 8.3D, 8.7B, 8.13A, 8.13B, 8.13C	
Activity: Measuring Parallax	726–727	8.1A, 8.2A, 8.2B, 8.2C, 8.2D, 8.3C, 8.4A, 8.5A, 8.5B, 8.5C, 8.13A, 8.13B	
Science Stats: Stars and Galaxies	728–729	8.2A, 8.2D, 8.13, 8.13A	
Chapter Study Guide	730–731	8.2E, 8.13A, 8.13B, 8.13C	
Chapter Assessment	732–733	8.2, 8.2A, 8.2B, 8.2C, 8.3, 8.13, 8.13A, 8.13B, 8.13C	

Correlation of Language Arts and Reading TEKS and TAKS to Glencoe Texas Science Grade 8

Knowledge and Skills	Glencoe Texas Science Student Edition (by page)	TAKS Grade 8 Reading
TEKS 8.1: <i>Listening/speaking/purposes</i> The student listens actively and purposefully in a variety of settings.	153, 357, 481	Not tested
TEKS 8.2: <i>Listening/speaking/critical listening</i> The student listens critically to analyze and evaluate a speaker's message(s).	153	Not tested
TEKS 8.4: <i>Listening/speaking/culture</i> The student listens and speaks to gain and share knowledge of his/her own culture, the culture of others, and the common elements of cultures.	581	Not tested
TEKS 8.5: <i>Listening/speaking/audiences</i> The student speaks clearly and appropriately to different audiences for different purposes and occasions.	79, 135, 145, 237, 319, 481, 655, 661	Not tested
TEKS 8.6: <i>Reading/word identification</i> The student uses a variety of word recognition strategies.	23, 29, 196, 365, 431	TAKS Objective 1 The student will demonstrate a basic understanding of culturally diverse written texts.
TEKS 8.7: <i>Reading/fluency</i> The student reads with fluency and understanding in texts at appropriate difficulty levels.	23	Not tested
TEKS 8.8: <i>Reading/variety of texts</i> The student reads widely for different purposes in varied sources.	23, 29, 365, 431, 453	Not tested
TEKS 8.9: <i>Reading/vocabulary development.</i> The student acquires an extensive vocabulary through reading and systematic word study.	196, 453, 607	TAKS Objective 1 The student will demonstrate a basic understanding of culturally diverse written texts.
TEKS 8.10: <i>Reading/comprehension</i> The student uses a variety of strategies to comprehend a wide range of texts of increasing levels of difficulty.	23, 29, 83, 153, 217, 245, 283, 295, 296, 297, 365, 431, 453, 459, 479, 489, 581, 599, 669	TAKS Objective 1 The student will demonstrate a basic understanding of culturally diverse written texts. TAKS Objective 3 The student will use a variety of strategies to analyze culturally diverse written texts.

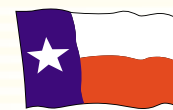


Knowledge and Skills	Glencoe Texas Science Student Edition (by page)	TAKS Grade 8 Reading
TEKS 8.10 (continued)		TAKS Objective 4 The student will apply critical thinking skills to analyze culturally diverse written texts.
TEKS 8.11: <i>Reading/literary response</i> The student expresses and supports responses to various types of texts.	5, 19, 23, 79, 327, 357, 380, 387, 581, 655, 661, 713	TAKS Objective 4 The student will apply critical thinking skills to analyze culturally diverse written texts.
TEKS 8.12: <i>Reading/text structures/literary concepts</i> The student analyzes the characteristics of various types of texts (genres).	5, 82, 83, 296, 297, 453	TAKS Objective 2 The student will apply knowledge of literary elements to understand culturally diverse written texts. TAKS Objective 3 The student will use a variety of strategies to analyze culturally diverse written texts. TAKS Objective 4 The student will apply critical thinking skills to analyze culturally diverse written texts.
TEKS 8.13: <i>Reading/inquiry/research</i> The student inquires and conducts research using a variety of sources.	21, 23, 29, 40, 51, 59, 81, 89, 107, 109, 121, 135, 145, 153, 170, 177, 185, 205, 217, 223, 237, 245, 267, 275, 283, 295, 303, 319, 339, 357, 365, 380, 395, 431, 440, 451, 479, 489, 489, 509, 511, 519, 525, 555, 581, 599, 607, 627, 639, 669, 675, 695, 703, 713, 727	Not tested
TEKS 8.14: <i>Reading/culture</i> The student reads to increase knowledge of his/her own culture, the culture of others, and the common elements of cultures.	380, 387, 567	Not tested
TEKS 8.15: <i>Writing/purposes</i> The student writes for a variety of audiences and purposes and in a variety of forms.	83, 135, 170, 177, 196, 205, 245, 254, 297, 440, 453, 479, 590	Not tested
TEKS 8.16: <i>Writing/penmanship/capitalization/punctuation/spelling</i> The student composes original texts, applying the conventions of written language such as capitalization, punctuation, penmanship, and spelling to communicate clearly.	29, 297, 365, 431, 453	Not tested

Correlation of **Language Arts and Reading TEKS and TAKS** to Glencoe Texas Science Grade 8 *continued*

Knowledge and Skills	<i>Glencoe Texas Science Student Edition (by page)</i>	TAKS Grade 8 Reading
TEKS 8.17: <i>Writing/grammar/usage</i> The student applies standard grammar and usage to communicate clearly and effectively in writing.	29, 365, 431, 453	Not tested
TEKS 8.18: <i>Writing/writing processes</i> The student selects and uses writing processes for self-initiated and assigned writing.	19	Not tested
TEKS 8.19: <i>Writing/evaluation</i> The student evaluates his/her own writing and the writings of others.	21, 453	Not tested
TEKS 8.20: <i>Writing/inquiry/research</i> The student uses writing as a tool for learning and research.	254, 345, 395, 440	Not tested
TEKS 8.21: <i>Writing/connections</i> The student interacts with writers inside and outside the classroom in ways that reflect the practical uses of writing.	675	Not tested
TEKS 8.22: <i>Viewing/representing/interpretation</i> The student understands and interprets visual images, messages, and meanings.	5, 283, 695	Not tested
TEKS 8.24: <i>Viewing/representing/production</i> The student produces visual images, messages, and meanings that communicate with others.	19, 40, 51, 59, 89, 121, 135, 185, 223, 237, 254, 275, 303, 339, 357, 395, 440, 451, 481, 519, 525, 555, 573, 599, 616, 639, 703, 713, 727, 824	Not tested

Correlation of Mathematics TEKS and TAKS to Glencoe Texas Science Grade 8



Knowledge and Skills	Glencoe Texas Science Student Edition (by page)	TAKS Grade 8 Mathematics
TEKS 8.1: Number, operation, and quantitative reasoning The student understands that different forms of numbers are appropriate for different situations. The student is expected to:		
(A) compare and order rational numbers in various forms including integers, percents, and positive and negative fractions and decimals.	39, 65, 66, 96, 99, 106, 141, 156, 158, 159, 165, 175, 265, 318, 324, 384, 417, 436, 463, 492, 538, 559, 563, 584, 706	TAKS Objective 1 The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.
(B) select and use appropriate forms of rational numbers to solve real-life problems including those involving proportional relationships.	39, 45, 66, 96, 99, 106, 143, 156, 158, 159, 165, 175, 195, 235, 265, 282, 318, 324, 350, 444, 492, 524, 584, 615, 621, 680, 719	
(D) express numbers in scientific notation, including negative exponents, in appropriate problem situations using a calculator.	39, 99, 106	
TEKS 8.2: Number, operation, and quantitative reasoning The student selects and uses appropriate operations to solve problems and justify solutions. The student is expected to:		
(A) select and use appropriate operations to solve problems and justify the selections.	39, 45, 66, 96, 99, 106, 143, 156, 158, 159, 165, 175, 195, 264, 265, 282, 318, 384, 415, 444, 463, 492, 493, 524, 584, 615, 621, 680, 706, 719	TAKS Objective 1 The student will demonstrate an understanding of numbers, operations, and quantitative reasoning.
(B) add, subtract, multiply, and divide rational numbers in problem situations.	39, 45, 66, 96, 99, 106, 143, 156, 158, 159, 165, 175, 195, 264, 265, 282, 318, 384, 415, 444, 492, 493, 524, 584, 615, 621, 680, 706, 719	
(C) evaluate a solution for reasonableness.	96, 99, 106	
(D) use multiplication by a constant factor (unit rate) to represent proportional relationships; for example, the arm span of a gibbon is about 1.4 times its height, $a = 1.4h$.	235	
TEKS 8.3: Patterns, relationships, and algebraic thinking The student identifies proportional relationships in problem situations and solves problems. The student is expected to:		
(A) compare and contrast proportional and non-proportional relationships.	235, 350	TAKS Objective 2 The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.
(B) estimate and find solutions to application problems involving percents and proportional relationships such as similarity and rates.	66, 99, 106, 235, 350, 384, 415, 584, 680, 706	
TEKS 8.4: Patterns, relationships, and algebraic thinking The student makes connections among various representations of a numerical relationship. The student is expected to:		
Generate a different representation given one representation of data such as a table, graph, equation, or verbal description.	66, 201, 265, 349, 385, 417, 559, 659, 706	TAKS Objective 2 The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.

Correlation of **Mathematics TEKS and TAKS** to Glencoe Texas Science Grade 8 *continued*

Knowledge and Skills	<i>Glencoe Texas Science Student Edition (by page)</i>	TAKS Grade 8 Mathematics
TEKS 8.5: Patterns, relationships, and algebraic thinking		
The student uses graphs, tables, and algebraic representations to make predictions and solve problems. The student is expected to:		
(A) estimate, find, and justify solutions to application problems using appropriate tables, graphs, and algebraic equations.	45, 65, 96, 156, 158, 159, 165, 175, 195, 201, 264, 265, 324, 349, 384, 415, 417, 436, 444, 463, 492, 559, 563, 584, 621, 680, 706, 719	TAKS Objective 2 The student will demonstrate an understanding of patterns, relationships, and algebraic reasoning.
(B) use an algebraic expression to find any term in a sequence.	385	
TEKS 8.7: Geometry and spatial reasoning		
The student uses geometry to model and describe the physical world. The student is expected to:		
(B) use geometric concepts and properties to solve problems in fields such as art and architecture.	659	TAKS Objective 3 The student will demonstrate an understanding of geometry and spatial reasoning.
(D) locate and name points on a coordinate plane using ordered pairs of rational numbers.	201, 463	
TEKS 8.8: Measurement		
The student uses procedures to determine measures of solids. The student is expected to:		
(C) estimate answers and use formulas to solve application problems involving surface area and volume.	143	TAKS Objective 4 The student will demonstrate an understanding of the concepts and uses of measurement.
TEKS 8.12: Probability and statistics		
The student uses statistical procedures to describe data. The student is expected to:		
(A) select the appropriate measure of central tendency to describe a set of data for a particular purpose.	493	TAKS Objective 5 The student will demonstrate an understanding of probability and statistics.
(B) draw conclusions and make predictions by analyzing trends in scatterplots.	559	
(C) construct circle graphs, bar graphs, and histograms, with and without technology.	265, 559	
TEKS 8.14: Underlying processes and mathematical tools		
The student applies Grade 8 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities inside and outside of school. The student is expected to:		
(A) identify and apply mathematics to everyday experiences, to activities inside and outside of school, with other disciplines, and with other mathematical topics.	39, 45, 65, 66, 96, 99, 106, 141, 143, 156, 158, 159, 165, 175, 195, 201, 235, 264, 265, 282, 286, 318, 324, 349, 350, 384, 385, 415, 417, 436, 444, 463, 492, 493, 524, 538, 559, 563, 584, 615, 621, 653, 659, 680, 706, 719	TAKS Objective 6 The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.



Knowledge and Skills	Glencoe Texas Science Student Edition (by page)	TAKS Grade 8 Mathematics
(B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.	39, 99, 106, 143, 159, 175, 195, 282, 286, 524, 615, 653, 719	TAKS Objective 6 The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.
(C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.	39, 99, 106, 143, 159, 175, 195, 282, 286, 524, 615, 653, 719	
(D) select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.	39, 45, 99, 106, 143, 156, 158, 159, 165, 175, 195, 282, 524, 615, 653, 719	
TEKS 8.15: Underlying processes and mathematical tools		
The student communicates about Grade 8 mathematics through informal and mathematical language, representations, and models. The student is expected to:		
(A) communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.	39, 45, 65, 66, 96, 99, 106, 141, 143, 156, 158, 159, 165, 175, 195, 201, 235, 264, 265, 282, 286, 318, 324, 349, 350, 384, 385, 415, 417, 436, 444, 463, 492, 493, 524, 538, 559, 563, 584, 615, 621, 653, 659, 680, 706, 719	TAKS Objective 6 The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.
TEKS 8.16: Underlying processes and mathematical tools		
The student uses logical reasoning to make conjectures and verify conclusions. The student is expected to:		
(A) make conjectures from patterns or sets of examples and nonexamples.	65, 324, 349, 436, 559, 653, 706	TAKS Objective 6 The student will demonstrate an understanding of the mathematical processes and tools used in problem solving.
(B) validate his/her conclusions using mathematical properties and relationships.	653	