

**California The Living Earth  
Miller & Levine Biology  
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**Evaluation Criteria Map**



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**Key:**

**SE** = Student Edition, **TE** = Teacher Edition, **Realize/Digital** = digital course

**PE** = Performance Expectation

**DCI** = Disciplinary Core Ideas

**SEP** = Science and Engineering Practices

**CCC** = Crosscutting Concepts

**Category 1: Science Content/Alignment with Standards**

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>1. Instructional Resources, as defined in <i>EC</i> Section 60010(h), must align to the CA NGSS, adopted by the SBE in September 2013 for kindergarten through grade five and resources from grades six through eight must be aligned either to the Integrated Learning Progression Courses for Middle Grades Six through Eight adopted in November 2013 found in chapter 5 of the <i>CA Science Framework</i> or, alternatively, the Discipline Specific Courses for Grades Six through Eight found in chapter 6 of the <i>CA Science Framework</i>. Alignment shall be determined by assessing a full year’s program, not unit by unit. When developing Discipline Specific courses, the publisher should consider which disciplinary core ideas, if any, from the other science domains would need to be introduced in specific grade-level courses in order to facilitate students’ full understanding of each performance expectation by the end of the year. For this reason, some units of the Discipline Specific Course model contain supplemental Disciplinary Core Ideas (DCIs) from other domains.</p>	<p>All CA NGSS are met in their entirety in the <i>California: The Living Earth/Biology</i>. See the correlation in the TE on TE16-TE42.</p> <p>Every California Spotlight, Chapter Opener, Lesson Opener, activity, and feature lists the CA NGSS that are either introduced, practiced, or assessed.</p> <p><b>SE:</b> Using Chapter 3 as an example, see pp. 76, 78, 83, 84, 85, 91, 92, 97, 101, 102, 106, 108-110, 111.</p> <p>In addition to the references in the student edition, the teacher edition also includes CA NGSS.</p> <p><b>TE:</b> Using Unit 2 and Chapter 3, see additional references on pp. 74A, 74B, 75, 76A, 76B, 77.</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>2. Instructional resources engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the Science and Engineering Practices (SEPs), Crosscutting Concepts (CCCs), and DCIs.</p>	<p>Text, discourse and experiential learning are used together in many places in the book to engage students in the three dimensions of NGSS. See three representative examples below.</p> <p><u>Example 1</u> <u>Text:</u> <b>SE:</b> Lesson 3.2 Climate, Weather, and Life, pp. 85-91 <u>Discourse:</u> <b>TE:</b> Lead a Discussion, p. 9 <u>Experiential Learning:</u> <b>SE:</b> Quick Lab: Why Do Different Earth Surfaces Have Different Temperatures?, p. 87 <b>Digital:</b> Chapter 3, Lesson 2 Interactivity; Chapter 3, Lesson 2 Animation; Chapter 3, Lesson 2 Video</p> <p><u>Example 2</u> <u>Text:</u> <b>SE:</b> Chapter 7, pp. 242-243 Performance-Based Assessment <u>Discourse:</u> <b>TE:</b> Use Visuals, p. 242 <u>Experiential Learning:</u> <b>SE:</b> Chapter 7, pp. 242-243 Performance-Based Assessment</p>			

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		Y	N	
Continued Instructional resources engage students in using text, discourse, and experiential learning to develop mastery of the three integrated dimensions of the CA NGSS: the Science and Engineering Practices (SEPs), Crosscutting Concepts (CCCs), and DCIs.	<u>Example 3</u> <b>SE:</b> <u>Text:</u> <b>SE:</b> Lesson 6.2: Succession, pp. 188-191 <u>Discourse:</u> <b>Realize:</b> Chapter 6, Lesson 2, Discussion Board <u>Experiential Learning:</u> <b>SE:</b> Quick Lab: How Does Succession Occur? p. 190			
3. Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.	The teacher edition provides general support and suggestions for integrating the three dimensions in each lesson. See examples listed below. <b>TE:</b> pp. 66, 86, 103, 107, 127, 138, 165, 172, 183, 224, 331, 359, 370, 399, 498, 560, 568, 598, 639, 641, 736, 752, 764, 776, 788, 803, 846, 863, 947  The teacher edition also provides more specific support and suggestions for integrating the SEPs and CCCs under the heading Build Science Skills. These are divided into subcategories, some linked to a SEP or a CCC. Examples are given below with each respective SEP or CCC list.			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.</p>	<p>In general, the SEP and CCC are woven into the SE in many different ways. They are included in assessment questions, labs, reviews, and enrichment activities such as Case Study Wrap-Ups and Performance-Based Assessments. They are also included in the digital resources available to students.</p> <p><b>SEP1</b> <u>Asking Questions</u> <b>SE:</b> Chapter 4, p. 141, Chapter Assessment #20 Chapter 8, p. 286 Performance-Based Assessment #2 Chapter 17, p. 565, Quick Lab #3 Chapter 22, p. 746, Figure 22-3</p> <p><b>Digital:</b> <b>Chapter Labs</b> Chapter 12, A Model of Meiosis Chapter 13, Using DNA to Identify Species</p> <p><u>Defining Problems</u> <b>SE:</b> Chapter 6, p. 191, Lesson Review #4 Chapter 9, p. 310, Case Study Wrap-Up #3 Chapter 16 p. 545 Performance-Based Assessment #1</p>			

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<p>Continued</p> <p>Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.</p>	<p><b>SEP2</b> <u>Developing and using models</u> <b>SE:</b> Chapter 2, p. 70, Chapter Assessment #50 Chapter 11, Performance-Based Assessment, pp. 378-379 Chapter 20, p. 662, Quick Lab Chapter 26, pp. 918-919, Performance-Based Assessment #4</p> <p><b>Digital:</b> <b>Chapter Labs</b> Chapter 10, Making a Model of Cellular Respiration Chapter 14, The Effect of Mutations Chapter 20, Formation of Caves</p> <p><b>SEP3</b> <u>Planning and carrying out investigations</u> Chapter 3, p. 109, Chapter Assessment #27 Chapter 10, p. 345, Chapter Assessment #31 Chapter 23, p. 817, Chapter Assessment #24</p>			

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<p>Continued</p> <p>Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.</p>	<p><b>Digital:</b> <b>Chapter Labs</b> Chapter 1, Algae in the Water Chapter 8, Detecting Diffusion Chapter 11, Regeneration in Planaria Chapter 23, How Do Plant Adaptations Compare?</p> <p><b>TE:</b> The teacher’s edition provides support and suggestions for integrating models under the heading Build Science Skills. See for example: 43, 135, 307, 427, 595, 831.</p> <p><b>SEP4</b> <u>Analyzing and interpreting data</u></p> <p><b>SE:</b> Most of the chapters in the student edition have a feature titled Analyze Data which provides real-world practice in this skill. See pages: 93, 157, 230, 280.</p> <p>At the chapter assessment level, there is also a feature titled Analyze and Interpret Data. See pages 70, 142, 588, 888.</p>			



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<p>Continued</p> <p>Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.</p>	<p>Some of the Performance-Based Assessments are also data rich and have students analyze data. See the following examples: Chapter 5, Performance-Based Assessment, pp. 172-173 Chapter 15, Performance-Based Assessment, pp. 510-511 Chapter 17, Performance-Based Assessment, pp. 584-585 Chapter 18, Performance-Based Assessment, pp. 616-617</p> <p><b>Digital:</b> <b>Chapter Labs</b> Chapter 16, Using DNA to Solve Crimes Chapter 25, Exercise and Heart Rate Chapter 27, Testing for Lead</p> <p><b>TE:</b> The teacher’s edition provides support and suggestions for integrating data analysis under the heading Build Science Skills. See examples at pp. 11, 93, 265, 710, 733.</p>			

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<p>Continued</p> <p>Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.</p>	<p><b>SEP5</b> <u>Using mathematics and computational thinking</u> <b>SE:</b> Chapter 4, p. 128, Analyzing Data #1, #2 Chapter 9, p. 315, Performance-Based Assessment #1, #2 Chapter 13, Performance-Based Assessment, pp. 444-445 Chapter 16 p. 548 Chapter Assessment #32-34</p> <p><b>Digital:</b> <b>Chapter Labs</b> Chapter 2, Temperature and Enzymes Chapter 4, The Effect of Fertilizer on Algae Chapter 5, Estimating Population Size Chapter 22, Exploring Plant Diversity</p> <p><b>SEP6</b> <u>Constructing Explanations</u> <b>SE:</b> Chapter 1, p. 18, Quick Lab #2 Chapter 11, p. 381 Chapter Assessment #30 Chapter 17, p. 584, Performance-Based Assessment #3 Chapter 21, p. 732, Case Study Wrap-up #1 Chapter 27, p. 973, Chapter Assessment #28</p>			

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<p>Continued</p> <p>Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.</p>	<p><b>Digital:</b> <b>Chapter Labs</b> Chapter 15, Gel Electrophoresis Chapter 19, Construct a Cladogram</p> <p><b>TE:</b> The teacher’s edition provides suggestions for helping students construct appropriate explanations under the heading Build Science Skills. See for example: 212, 330, 437, 519, 581, 689, 829.</p> <p><u>Designing Solutions:</u> <b>SE:</b> Chapter 1, Performance-Based Assessment, pp. 34-35 Chapter 6, Performance-Based Assessment, pp. 202-203 Chapter 7, Performance-Based Assessment, pp. 242-243 Chapter 23, Performance-Based Assessment, pp. 814-815 Chapter 24, Performance-Based Assessment, pp. 854-855 Chapter 25, Performance-Based Assessment, pp. 884-885</p>			

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Continued Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.	<p><b>Digital:</b> <b>Chapter Labs</b> Chapter 9, Plant Pigments and Photosynthesis Chapter 21, Tracing an Outbreak Chapter 26, Designing Artificial Limbs</p> <p><b>TE:</b> The teacher’s edition prompts to have students design solutions under the heading Build Science Skills. See for example: 169, 239, 287, 444, 643, 851</p> <p><b>SEP7</b> <u>Engaging in argument from evidence</u> <b>SE:</b> Chapter 3, Performance-Based Assessment, pp. 106-107 Chapter 8, p. 289 Chapter Assessment #33, #36 Chapter 12, p. 419, Chapter Assessment #26 Chapter 18, p. 612 Case Study Wrap-Up #2 Chapter 22, pp. 776-777, Performance-Based Assessment #4</p>			

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		Y	N	
<p>Continued</p> <p>Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.</p>	<p><b>Digital:</b> <b>Chapter Labs</b> Chapter 7, Calculating Ecological Footprint Chapter 17, Evidence of Evolution</p> <p><b>TE:</b> The teacher’s edition provides suggestions to engage students in argument through evidence under the heading Build Science Skills. See for example: 62, 107, 329, 408, 568, 676, 786, 903</p> <p><b>SEP8</b> <u>Obtaining, evaluating, and communicating information</u></p> <p><b>SE:</b> Chapter 10, Performance-Based Assessment, pp. 342-343 Chapter 12, Performance-Based Assessment, pp. 416-417 Chapter 19, Performance-Based Assessment, pp. 646-647 Chapter 21, Performance-Based Assessment, pp. 736-737</p> <p><b>Digital:</b> <b>Chapter Labs</b> Chapter 5, Estimating Population Size Chapter 12, A Model of Meiosis Chapter 18, Competing for Resources</p>			

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<p>Continued</p> <p>Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.</p>	<p><b>CCC1</b> <u>Patterns</u> <b>SE:</b> Chapter 8, p. 285, Study Guide Chapter 13, p. 431, Analyzing Data #1 Chapter 15, p. 491 Lesson Review #6 Chapter 22, p. 780, Chapter Assessment #37</p> <p><b>Digital:</b> <b>Chapter Labs</b> Chapter 18, Competing for Resources Chapter 19, Construct a Cladogram Chapter 23, How Do Plant Adaptations Compare?</p> <p><b>CCC2</b> <u>Cause and effect</u> <b>SE:</b> Chapter 11, p. 376, Study Guide Chapter 15, p. 514 Chapter Assessment #35, #37 Chapter 22, p. 754, Check Point</p>			

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		Y	N	
Continued Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.	<p><b>CCC3</b> <u>Scale, proportion, and quantity</u> <b>SE:</b> Chapter 1, p. 38, Chapter Assessment #31 Chapter 5, p. 176, Chapter Assessment #33 Chapter 6, p. 206, Chapter Assessment #30 Chapter 12, p.420, Chapter Assessment #32 Chapter 18, p. 620, Chapter Assessment #33</p> <p><b>CCC4</b> <u>Systems and system models</u> <b>SE:</b> Chapter 3, p. 84, Lesson Review #6 Chapter 11, p. 382, Chapter Assessment #32 Chapter 27, p. 974, Chapter Assessment #38</p> <p><b>CCC5</b> <u>Energy and matter:</u> <b>SE:</b> Chapter 2, p. 70, Chapter Assessment, #45 Chapter 9, p. 318, Chapter Assessment #32 Chapter 10, p. 346, Chapter Assessment #37, #38</p>			

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Continued Instructional resources reflect the full content of the <i>CA Science Framework</i> allowing teachers to engage students in using each of the SEPs in multiple contexts and to use and apply the CCCs to connect ideas across science topics.	<p><b>CCC6</b> <u>Structure and function:</u> <b>SE:</b> Chapter 8, p. 290, Chapter Assessment #39 Chapter 16, p. 548, Chapter Assessment #31 Chapter 20, p. 696, Chapter Assessment #30 Chapter 22, p. 748, Lesson Review #4 Chapter 25, p. 882 Study Guide, 25.1</p> <p><b>TE:</b> The teacher’s edition provides suggestions to have students connect structure to function under the heading Build Science Skills. See for example: 722</p> <p><b>CCC7</b> <u>Stability and change:</u> <b>SE:</b> Chapter 6, p. 206, Chapter Assessment, #31 Chapter 7, p. 246, Chapter Assessment #34 Chapter 20, p. 696, Chapter Assessment #32 Chapter 27, p. 974, Chapter Assessment #37</p>			



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		Y	N	
4. Instructional resources progressively build students' abilities to meet all grade-level Performance Expectations (PEs) through a three-dimensional instructional sequence.	<p>Throughout the SE, the text and instructional materials (such as labs, assessments, case studies, and performance-based assessments) integrate the DCI, SEP, and CCC to lead students to PE mastery. The DCI are mostly covered within the text, and the SEP and CCC are covered with labs and assessments. This is so that when students are asked to master each PE, they have had the opportunity to cover all three dimensions.</p> <p>There are also assets in the teacher's edition side notes that help teachers steer students towards PE mastery. These activities include Build Science Skills, Use Visuals, Connect to Chemistry, and Reading Tools. At the beginning of each chapter, there is an Integrate the Three Dimensions feature box that describes a chapter-specific PE and the three dimensions of learning that can be found in the chapter.</p>			

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		Y	N	
Continued Instructional resources progressively build students' abilities to meet all grade-level Performance Expectations (PEs) through a three-dimensional instructional sequence.	<p><b>TE:</b> Figure 10-3 Up Close, p. 327; Reading Tool, p. 331</p> <p><b>PE Mastered:</b></p> <p><b>SE:</b> Case Study Wrap-Up, p. 474</p> <p><u>Example 2</u> (HS-LS1-7)</p> <p><b>PE Introduced:</b></p> <p><b>SE:</b> Lesson 10.1, pp. 322-325.</p> <p><b>PE Built Upon:</b></p> <p><b>SE:</b> Lesson 10.2, pp. 326-332; Lesson 10.3, pp. 333-337.</p> <p><b>DCI Integrated:</b></p> <p><b>SE:</b> Lesson 10.1, pp. 322-325; Lesson 10.2, pp. 326-332; Lesson 10.3, pp. 333-337.</p> <p><b>SEP Integrated:</b></p> <p><b>SE:</b> Lesson 10.2, pp. 326-332; Chapter 10 Assessment, p. 345, Chapter 10 Assessment, p. 345.</p> <p><b>Digital:</b> Chapter 10 Chapter Lab</p> <p><b>CCC Integrated:</b></p> <p><b>SE:</b> Lesson 10.1, pp. 322-325; Lesson 10.2, pp. 326-332; Chapter 10 Assessment, p. 346.</p> <p><b>PE Mastered:</b></p> <p><b>Digital:</b> Chapter 10 Chapter Lab</p>			

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		Y	N	
Continued Instructional resources progressively build students' abilities to meet all grade-level Performance Expectations (PEs) through a three-dimensional instructional sequence.	<p><u>Example 3</u> (HS-LS4-1)</p> <p><b>PE Introduced:</b> <b>SE:</b> Chapter 17 Case Study, p. 555.</p> <p><b>PE Built Upon:</b> <b>SE:</b> Chapter 17 Analyzing Data Lab, p. 557; Lesson 17.1, pp. 558-560; Lesson 17.3, pp 570-571; Lesson 17.4, pp. 572-579.</p> <p><b>DCI Integrated:</b> <b>SE:</b> Lesson 17.4, pp. 572-579.</p> <p><b>SEP Integrated:</b> <b>SE:</b> Chapter 17 Assessment, p. 588 #40 <b>TE:</b> Chapter 17 Opener, p. 554, Introduce the Case; Lesson 17.1, p. 558, Build Science Skills; Lesson 17.2, p. 564, Support Advanced Students' Performance-Based Assessment, p. 584, Build Writing Skills.</p> <p><b>CCC Integrated:</b> <b>SE:</b> Chapter 17 Assessment, p. 588, #33, #42; Chapter 17 Opener, p. 555 Case Study; Chapter 17 Analyzing Data Lab, p. 557, #1; Lesson 17.1, pp. 558, 560; Lesson 17.1 Review, p. 560, #3; Lesson 17.4, pp. 572-579.</p> <p><b>PE Mastered:</b> <b>Digital:</b> Chapter 17 Chapter Lab</p>			

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		Y	N	
5. Teacher resources support instructional opportunities and assessments that engage students in three-dimensional learning.	<p>The TE includes many tips and instructions to help teachers engage students in three-dimensional learning. At the start of each chapter, an Integrate the Three Dimensions box outlines a specific performance expectation and how the three dimensions support this PE throughout the chapter. In each lesson, there are many features in the side wrap that help teachers support students' learning of the content. Some of these features include Assess on the Spot, Build Science Skills, and Reading Tools.</p> <p>The latter two can also be found in the page wrap for the Case Study Wrap-Ups and Performance-Based Assessments, which are where many PEs are mastered in the book. These activities or questions enrich the three-dimensional nature of the performance expectations.</p>			

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		Y	N	
Continued Teacher resources support instructional opportunities and assessments that engage students in three-dimensional learning.	To accompany the assessment questions at the end of each lesson, a Remediate tool pinpoints questions that students may have trouble answering, and provides the teacher with a strategy to support students. All assessment questions throughout the book are labeled with red run-in heads that specify the question’s theme. These run-in heads often identify a SEP or CCC.  <b>TE:</b> Chapter 10, p. 321, Integrate the Three Dimensions Lesson 12.4, p. 411, Remediate Lesson 15.2, p. 494, Reading Tool, CCC Cause and Effect Lesson 20.3, p. 680, Assess on the Spot, SEP Ask Questions			
6. Instructional resources shall use proper grammar and spelling (EC Section 60045).	All course materials adhere to this criterion.			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
7. Use of primary sources, such as scientific research, case studies, and photographs, are integrated into the three-dimensional learning, as grade-level appropriate.	<p>This program enlists the help of many real-life scenarios, case studies, research, and photos to guide students through three-dimensional learning.</p> <p><u>Scientific Research</u> <b>SE:</b> Chapter 5, p. 169, Society on the Case Chapter 6, p. 199, Technology on the Case Chapter 16, p. 537, Analyzing Data, Genetically Modified Crops in the United States Chapter 22, p. 776-777, Performance-Based Assessment</p> <p><u>Case Studies</u> <b>SE:</b> Chapter 5; pp. 145, 149, 163, 166, 168; Case Study “What can we learn from China?” Chapter 6; pp. 179, 185, 186, 197, 198; Case Study “How do species interactions shape ecosystems?” Chapter 16; pp. 517, 526, 530, 537, 538, 539, 540; Case Study “What will the future hold for genetically modified crops?” Chapter 22; pp. 743, 748, 753, 755, 770, 772; Case Study “How did plants conquer the land?”</p>			

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Continued Use of primary sources, such as scientific research, case studies, and photographs, are integrated into the three-dimensional learning, as grade-level appropriate.	<u>Photographs</u> <b>SE:</b> Chapter 5; 144-145, 148, 153, 159, 164, 165, 167, 168 Chapter 6; p. 178, 191, 194, 198 Chapter 16; p. 516, 518, 521, 522, 529, 531, 539, 540 Chapter 22; p. 742-743, 746, 751, 753, 754, 756, 757, 760, 761, 764, 766, 768, 769, 770, 772			

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		Y	N	
8. Instructional resources introduce real-world phenomena and systems that students can investigate, model, and explain using the targeted DCIs and CCCs.	<p>Each chapter concludes with a Performance-Based Assessment where students are asked to apply DCIs and content from the chapter to address a phenomena or system.</p> <p><u>Real-world phenomena</u> <b>SE:</b> <u>Investigate and explain</u> Chapter 4, pp. 138-139, Performance-Based Assessment Chapter 9, pp. 314-315, Performance-Based Assessment</p> <p><u>Model and explain</u> <b>SE:</b> Chapter 2, pp. 66-67, Performance-Based Assessment Chapter 19, pp. 646-647, Performance-Based Assessment</p> <p><u>Systems</u> <b>SE:</b> <u>Investigate and explain</u> Chapter 6, p. 202-203, Performance-Based Assessment Chapter 26, pp. 918-919, Performance-Based Assessment</p>			



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		Y	N	
Continued Instructional resources introduce real-world phenomena and systems that students can investigate, model, and explain using the targeted DCIs and CCCs.	<u>Model and explain</u> <b>SE:</b> Chapter 1, pp. 34-35, Performance-Based Assessment Chapter 17, pp. 584-585, Performance-Based Assessment			
9. Instructional resources focus on the application of science to be learned (e.g., medicine, engineering, environmental science) using authentic and meaningful real-world applications and scenarios that are specific to California when appropriate.	Many references to California wildlife and ecosystems are included in this program, especially in the chapters that weave environmental science into the biology content. Each of these examples links the content to real-world applications and scenarios. These applications of science, medicine, and engineering can be found in Case Studies, Performance-Based Assessments, and other smaller assets in the SE and TE.  <b>SE:</b> Bioregions of California, pp. xxix-xxxiv			

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		Y	N	
<p>Continued</p> <p>Instructional resources focus on the application of science to be learned (e.g., medicine, engineering, environmental science) using authentic and meaningful real-world applications and scenarios that are specific to California when appropriate.</p>	<p><u>Applications of Medicine</u> <b>SE:</b> Chapter 11, p. 373 Chapter 11, p. 374, Case Study Wrap-Up Chapter 11, p. 375, Technology on the Case Chapter 21, p. 732, p. 732, Case Study Wrap-Up Chapter 21, p. 733, Society on the Case</p> <p><u>Applications of Engineering</u> <b>SE:</b> Chapter 1, p. 20, Figure 1-10 Chapter 7 pp. 242-243, Performance-Based Assessment Chapter 24, p. 854-855, Performance-Based Assessment</p> <p><b>TE:</b> Chapter 9, p. 311, Build Writing Skills Chapter 10, p. 342, Build Science Skills Chapter 23, p. 815, Build Writing Skills</p>			

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		Y	N	
<p>Continued</p> <p>Instructional resources focus on the application of science to be learned (e.g., medicine, engineering, environmental science) using authentic and meaningful real-world applications and scenarios that are specific to California when appropriate.</p>	<p><u>Applications of Environmental Science</u></p> <p><b>SE:</b> Chapter 3, p. 103, Technology on the Case Chapter 4, pp. 113, 134, Case Study, Case Study Wrap-Up</p> <p>Chapter 4, pp. 138-139, Performance-Based Assessment Chapter 5, pp. 166-167 Chapter 9, pp. 314-315, Performance-Based Assessment Chapter 19, pp. 646-647, Performance-Based Assessment</p> <p><b>TE:</b> Chapter 4, p. 135, Take it Local Chapter 5, pp. 166-167, California Droughts, Wildfires, and Floods teacher wrap support Chapter 5, p. 169, Take it Local Chapter 7, p. 219, Professional Development Chapter 9, p. 311, Take it Local</p>			

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		Y	N	
<p>9. The science curriculum is enriched with opportunities for students to access informational texts, literature, simulations and other media related to science and engineering and it presents diverse examples of notable scientists and engineers.</p>	<p>Students are given many opportunities to utilize informational texts, outside literature, and simulations to enrich their biology content knowledge. These opportunities can be found within the student and teacher editions, and in the Problem-Based Learning activities. There are also ample examples of biology-related careers and famous scientists woven throughout the student edition.</p> <p><u>Informational Texts</u> <b>SE:</b> Chapter 2, p. 41 “The Search for a Missing Element” Chapter 6, p. 199, “Technology on the Case: Follow that Wolf!” Chapter 8, p. 283, “Stopping LHON Before It Starts”</p> <p><u>Literature</u> <b>TE:</b> Chapter 5, p. 165, Connect to English Language Arts Chapter 21, p. 709, Build Writing Skills Chapter 24, p. 848, Connect to Literature</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>The science curriculum is enriched with opportunities for students to access informational texts, literature, simulations and other media related to science and engineering and it presents diverse examples of notable scientists and engineers.</p>	<p><u>Simulations and Media</u></p> <p><b>SE:</b> Chapter 4, p. 122, Interactivity Chapter 5, p. 166, Quick Lab, "Modeling Population Changes" Chapter 6, p. 199, Video "Surveying Gorongosa's Biodiversity"</p> <p><b>TE:</b> Chapter 8, p. 257, Professional Development Chapter 11, p. 359, Professional Development Chapter 20, p. 664, Professional Development</p> <p><u>Problem-Based Learning:</u> Unit 1 Authentic Reading: <i>Solar Still Made of Bubble Wrap Could Purify Water for the Poor</i> Unit 2 Authentic Reading: <i>To Tame a 'Wave' of Invasive Bugs, Park Service Introduces Predator Beetles</i> Unit 3 Authentic Reading: <i>Gold Rush for Algae</i> Unit 4 Authentic Reading: <i>Sickle-Cell Mystery Solved</i> Unit 5 Authentic Reading: <i>Tiktaalik's internal anatomy explains the evolutionary shift from water to land.</i></p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>The science curriculum is enriched with opportunities for students to access informational texts, literature, simulations and other media related to science and engineering and it presents diverse examples of notable scientists and engineers.</p>	<p>Unit 6 Authentic Reading: <i>Walnut trees may not be able to withstand climate change.</i></p> <p><u>Notable Scientists, Engineers, and Careers</u></p> <p>Many lessons have references to scientists or engineers that gave important contributions to the study of biology. Examples listed below.</p> <p><b>SE:</b></p> <p>Chapter 11, p. 367, Ernest Everett Just Chapter 13, p. 426-427, Martha Chase and Alfred Hershey Chapter 13, pp. 432, Rosalind Franklin Chapter 17, pp. 578-579, 584, Peter and Rosemary Grant Chapter 24, p. 841, Zeresenay Alemseged Chapter 24, p. 851, Jane Goodall</p> <p>The HHMI career videos associated with each chapter show a diverse representation of scientists in their respective fields.</p> <p><b>Digital:</b></p> <p>Chapter 3 Analyzing Patterns in the Savanna Landscape Chapter 5 Tracking Lion Recovery in Gorongosa National Park Chapter 6 Surveying Gorongosa’s Biodiversity</p>			

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<p>11. Resources include examples of people and groups who used their context, learning, and intelligence to make important contributions to society through science and technology from different demographic groups: Native Americans; African Americans; Mexican Americans and other Latino groups; Asian Americans; Pacific Islanders; European Americans; lesbian, gay, bisexual, and transgender Americans; persons with disabilities; women; and members of other ethnic and cultural groups. Resources emphasize the importance of science education to all members of our society in a way that is culturally and socially authentic [EC Sections 51051, 60040(b), and 60044(a)].</p>	<p><b>SE:</b> See the previous entry for the scientists and engineers that are discussed in the student edition.</p> <p><u>Biography Docs</u></p> <p><b>Realize:</b> Albert Baez Pao Baylon Sangeeta Bhatia Rachel Carson Eugenie Clark John Dabiri Rochelle Diamond Kale Edmiston Juliet Johnston Ernest Everett Just Marigold Linton Leticia Marquez-Magana Kenneth Mayer Mario Molina Severo Ochoa Ku-ulie Rodgers Pardis Sabeti Mary Styles Harris Geerat Vermeij Shinya Yamanaka</p>			

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<p>12. Student assignments make linkages and are consistent with the grade-level appropriate expectations in the California Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects (CA CCSS for ELA/Literacy), the California English Language Development Standards: Kindergarten through Grade 12 (CA ELD Standards), and California Common Core State Standards: Mathematics (CA CCSSM) and are consistent with the guidance in the <i>CA Science Framework</i>.</p>	<p>Associations to the California Common Core State Standards for English Language Arts in History/Social Studies, Science, and Technical Subjects as well as the California English Language Development Standards and the California Common Core State Standards in Mathematics are listed in both the SE and TE. The ELA/Literacy and Math standards are listed in the SE in Case Studies, Performance-Based Assessments, and Chapter Assessments while the ELD standards are featured in the TE wrap with suggested activities for teachers to engage students.</p> <p><u>ELA/Literacy</u> <b>SE:</b> Chapter 7, p. 246, Chapter Assessment #43 (SL.9-10.4, WHST.11-12.4, WHST.9-12.9, RST11-12.4) Chapter 14, p. 479 #4 Performance-Based Assessment (WHST.9-12.7, RST.9-10.7)</p> <p>Chapter 21, p. 736, Performance-Based Assessment (WHST.9-10.1, WHST.9-10.2, WHST.9-10.6, WHST.9-10.7, WHST.9-10.8)</p>			



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<p>Continued</p> <p>Student assignments make linkages and are consistent with the grade-level appropriate expectations in the California Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects (CA CCSS for ELA/Literacy), the California English Language Development Standards: Kindergarten through Grade 12 (CA ELD Standards), and California Common Core State Standards: Mathematics (CA CCSSM) and are consistent with the guidance in the <i>CA Science Framework</i>.</p>	<p><u>Math</u></p> <p><b>SE:</b> Chapter 4, p. 142, Chapter Assessment #31-33 (HSN.Q.A.1) Chapter 5, 172-173, Performance-Based Assessment (S-IC.1) Chapter 12, p. 420, Chapter Review #33 (MP.2 and MP.4)</p> <p><b>Realize</b> <b>Program Resources folder, Skills Activities:</b> These tutorials from HHMI provide guidance and support for various math skills including: Formulae, Functions, and Averages; Autofill Data, Cell References, and Standard Deviation; Column Graphs, Error Bars, and Standard Error of the Mean; t-Test; and Histograms</p> <p><u>ELD</u></p> <p><b>TE:</b> Chapter 1, p. 13, ELD Support (ELD.PI.9-10.9) Chapter 13, p. 427, ELD Support (ELD.PI.9-10.5) Chapter 25, p. 877, ELD Support (ELD.PI.9-10.7)</p>			

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13. The materials provide support for students to develop grade-level appropriate academic language and discipline-specific vocabulary through their use in context in classroom discourse around science phenomena (science talk), and through well-written and grade-level appropriate text resources.	<p>Emphasis on grade-level appropriate scientific language can be found in a few different places throughout the SE and TE. In the SE, Check Point questions often reflect on vocabulary terms. Build Vocabulary features are listed in the SE and include teaching notes in the corresponding TE pages. There are also sections in the end-of-chapter assessments titled Read About Science and Write About Science that help students develop literacy skills in relation to their biology content knowledge.</p> <p><b>Academic language</b> <u>Discourse</u> <b>TE:</b> Chapter 16, p. 529 (Build Vocabulary Skills) Chapter 17, p. 562 (Build Vocabulary Skills) Chapter 19, p. 633 (Build Vocabulary Skills)</p>			

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<p>Continued</p> <p>The materials provide support for students to develop grade-level appropriate academic language and discipline-specific vocabulary through their use in context in classroom discourse around science phenomena (science talk), and through well-written and grade-level appropriate text resources.</p>	<p><u>Text</u> <b>SE:</b> Some Build Vocabulary features in the SE are titled Academic Words. In these features students are given strategies to help develop academic vocabulary. See representative samples on pages: 14, 45, 120, 156, 256, 275, 363, 371</p> <p><b>Discipline-specific vocabulary</b> <u>Discourse</u> <b>SE:</b> Chapter 5, p. 148 (Check Point-Summarize)</p> <p><b>TE:</b> Chapter 14, p. 466 (Build Vocabulary Skills) Chapter 23, p. 802 (Build Vocabulary Skills) Assessment #40</p> <p><u>Text</u> <b>SE:</b> Chapter 2, p. 49, Checkpoint Chapter 9, p. 297, Compare and Contrast Chapter 16, p. 548, Read About Science</p>			

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14. Teacher resources provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.	<p>On almost every spread of the Teacher's Edition, there are features titled <i>Differentiated Instruction</i>. These features provide instruction for teachers to support various types of learners. A few representative examples are listed below:</p> <p><u>Less Proficient Readers:</u> <b>TE:</b> pp. 19, 25, 49, 60, 79, 87</p> <p><u>Struggling Students:</u> <b>TE:</b> pp. 9, 11, 16, 17, 24, 30, 48</p> <p><u>Special Needs Students:</u> <b>TE:</b> pp. 23, 44, 56, 83, 86, 93</p> <p><u>Advanced Students:</u> <b>TE:</b> pp. 12, 28, 34, 55, 62, 86</p> <p>In addition, there is additional support for struggling students as well as ELL students in the Feature Using the Key Questions that can be found on the lesson openers. A few representative examples are listed: <b>TE:</b> pp. 15, 22, 42, 52, 123, 160, 210</p>			

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<p>Continued</p> <p>Teacher resources provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.</p>	<p>For <b>non-English speaking students</b>, there is a multilingual glossary that provides translation of the Student book glossary into 9 different languages including: traditional Chinese, simplified Chinese, Russian, Vietnamese, Arabic, Haitian Creole, Hmong, and Korean.</p> <p><b>Realize, Program Resources,</b> Multilingual Glossary</p> <p><b>ELD Students</b> <u>Exchanging Information/Ideas PI.9-10.1:</u></p> <p><b>TE:</b> Chapter 7, p. 230, ELD Support Chapter 9, p. 306, ELD Support Chapter 13, p. 434, ELD Support Chapter 20, p. 677, ELD Support</p> <p><u>Interacting via Written English PI.9-10.2:</u> <b>TE:</b> Chapter 5, p. 155, ELD Support Chapter 8, p. 258, ELD Support Chapter 24, p. 832, ELD Support</p> <p><u>Supporting Opinions and Persuading Others PI.9-10.3</u> <b>TE:</b> Chapter 1, p. 27, ELD Support Chapter 14, p. 458, ELD Support</p>			

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<p>Continued</p> <p>Teacher resources provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.</p>	<p><u>Adapting Language Choices PI.9-10.4</u> <b>TE:</b> Chapter 20, p. 662, ELD Support Chapter 20, p. 685, ELD Support</p> <p><u>Listening Actively</u> <u>PI.9-10.5:</u> <b>TE:</b> Chapter 8, p. 279, ELD Support Chapter 12, p. 403, ELD Support Chapter 18, p. 600, ELD Support Chapter 27, p. 929, ELD Support</p> <p><u>Reading/Viewing Closely</u> <u>PI.9-10.6:</u> <b>TE:</b> Chapter 3, p. 88, ELD Support Chapter 5, p. 151, ELD Support Chapter 13, p. 437, ELD Support Chapter 18, p. 610, ELD Support</p> <p><u>Evaluating Language Choices PI.9-10.7</u> <b>TE:</b> Chapter 16, p. 537, ELD Support Chapter 25, p. 877, ELD Support Chapter 26, p. 907, ELD Support Chapter 27, p. 961, ELD Support</p>			

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<p>Continued</p> <p>Teacher resources provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.</p>	<p><u>Analyzing Language Choices PI.9-10.8</u> <b>TE:</b> Chapter 7, p. 235, ELD Support</p> <p><u>Presenting PI.9-10.9</u> <b>TE:</b> Chapter 4, p. 120, ELD Support Chapter 5, p. 162, ELD Support Chapter 19, p. 635, ELD Support</p> <p><u>Writing PI.9-10.10:</u> <b>TE:</b> Chapter 11, p. 369, ELD Support Chapter 18, p. 595, ELD Support Chapter 22, p. 762, ELD Support</p> <p><u>Justifying/Arguing PI.9-10.11:</u> <b>TE:</b> Chapter 1, p. 20, ELD Support Chapter 20, p. 670, ELD Support</p> <p><u>Selecting Language Resources P1.9-10.12</u> <b>TE:</b> Chapter 10, p. 324, ELD Support Chapter 19, p. 629, ELD Support</p> <p><u>Exchanging Information/Ideas PI.11-12.1</u> <b>TE:</b> Chapter 12, p. 391, ELD Support Chapter 12, p. 408, ELD Support</p>			

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<p>Continued</p> <p>Teacher resources provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.</p>	<p><u>Writing PI.11-12.2:</u> <b>TE:</b> Chapter 4, p. 131, ELD Support Chapter 12, p. 399, ELD Support</p> <p><u>Supporting Opinions and Persuading Others PI.11-12.3</u> <b>TE:</b> Chapter 11, p. 353, ELD Support</p> <p><u>Adapting Language Choices PI.11-12.4</u> <b>TE:</b> Chapter 10, p. 330, ELD Support</p> <p><u>Listening Actively PI.11-12.5</u> <b>TE:</b> Chapter 15, p. 494, ELD Support Chapter 17, p. 569, ELD Support Chapter 23, p. 825, ELD Support</p> <p><u>Reading/Viewing Closely PI.11-12.6:</u> <b>TE:</b> Chapter 4, p. 115, ELD Support Chapter 17, p. 558, ELD Support Chapter 27, p. 948, ELD Support</p> <p><u>Evaluating Language Choices PI.11-12.7</u> <b>TE:</b> Chapter 6, p. 183, ELD Support Chapter 24, p. 841, ELD Support</p>			



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<p>Continued</p> <p>Teacher resources provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.</p>	<p><u>Analyzing Language Choices PI.11-12.8</u> <b>TE:</b> Chapter 6, p. 194, ELD Support</p> <p><u>Presenting PI.11-12.9</u> <b>TE:</b> Chapter 11, p. 357, ELD Support Chapter 21, p. 723, ELD Support Chapter 24, p. 847, ELD Support</p> <p><u>Writing PI.11-12.10</u> <b>TE:</b> Chapter 15, p. 489, ELD Support Chapter 21, p. 717, ELD Support Chapter 23, p. 791, ELD Support</p> <p><u>Justifying/Arguing PI.11-12.11</u> <b>TE:</b> Chapter 15, p. 500, ELD Support Chapter 17, p. 565, ELD Support Chapter 23, p. 808, ELD Support</p> <p><u>Selecting Language Resources PI.11-12.12</u> <b>TE:</b> Chapter 11, p. 365, ELD Support Chapter 17, p. 577, ELD Support</p>			

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<p>Continued</p> <p>Teacher resources provide guidance to support all students, including language learners and non-standard English speakers, to develop their science-related language and reading abilities, and to coordinate the multiple elements (text, diagrams, graphs and charts, etc.) that occur in science textual materials.</p>	<p><b>Digital</b></p> <p><u>Chapter Labs</u> To help teachers support different types of learners, every chapter lab is offered in two versions--one on-level and one below-level. This gives teachers the opportunity to customize the labs for their particular students. The labs are basically the same, but the lower-level lab provides additional scaffolding support for students.</p> <p><u>Program Resources, Graphic Organizers</u> This collection of blank graphic organizers allows teachers to help students with their reading skills. These graphic organizers include: cause-and-effect diagram, cluster diagram, compare/contrast table, concept map, Cornell notes, cycle diagram, fishbone map, flowchart, Frayer model, ELL Frayer model, KWL, BKWL, main ideas and details chart, spider map, T-chart, two-column table, vocabulary word map, and Venn diagram.</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>15. Instructional resources, where appropriate, examine humanity’s place in ecological systems and the necessity for the protection of the environment (EC Section 60041). Resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency and adopted by the SBE (Public Resources Code Section 71301) in context and aligned to the CA NGSS, as exemplified in Appendix 2.</p>	<p><u>EP&amp;CIa</u> <b>SE:</b> Chapter 1, p. 30 Chapter 3, p. 102 Chapter 6, pp. 192-197 Chapter 7, pp. 210-215, 233-237 Chapter 23, pp. 806-809, 810</p> <p><u>EP&amp;CIb</u> <b>SE:</b> Chapter 3, p. 102 Chapter 6, pp. 192-197 Chapter 7, pp. 210-215, 233-237 Chapter 23, pp. 814-815 Chapter 27, p. 966</p> <p><u>EP&amp;CIc</u> <b>SE:</b> Chapter 3, p. 102 Chapter 6, pp. 192-197 Chapter 9, pp. 314-315 Chapter 20, pp. 674-683 Chapter 22, pp. 776-777</p> <p><u>EP&amp;CIla</u> <b>SE:</b> Chapter 3, pp. 102, 106-107 Chapter 4, pp. 123-133, 134 Chapter 6, pp. 188-191 Chapter 7, pp. 210-215, 216-226, 227-232 Chapter 20, pp. 667-673</p>			

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		Y	N	
<p>Continued</p> <p>Instructional resources, where appropriate, examine humanity's place in ecological systems and the necessity for the protection of the environment (EC Section 60041). Resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency and adopted by the SBE (Public Resources Code Section 71301) in context and aligned to the CA NGSS, as exemplified in Appendix 2.</p>	<p><u>EP&amp;CIIB</u> <b>SE:</b> Chapter 3, pp. 78-84 Chapter 7, pp. 216-226, 233-237 Chapter 16, pp. 518-520, 528-535, 536-539, 540 Chapter 23, pp. 806-809, 810 Chapter 24, pp. 880-881 <b>Digital:</b> <b>Chapter Labs</b> Chapter 4, The Effect of Fertilizer on Algae</p> <p><u>EP&amp;CIIC</u> <b>SE:</b> Chapter 3, pp. 106-107 Chapter 6, p. 198 Chapter 7, pp. 210-215, 216-226, 227-232, 233-237 Chapter 24, pp. 854-855</p> <p><u>EP&amp;CIID</u> <b>SE:</b> Chapter 7, pp. 216-226, 233-237 Chapter 24, pp. 854-855</p> <p><u>EP&amp;CIIIa</u> <b>SE:</b> Chapter 3, pp. 78-84, 85-91, 102 Chapter 4, pp. 118-122, 123-133 Chapter 6, pp. 180-187, 195, 202-203 Chapter 20, pp. 674-683</p>			

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<p>Continued</p> <p>Instructional resources, where appropriate, examine humanity's place in ecological systems and the necessity for the protection of the environment (EC Section 60041). Resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency and adopted by the SBE (Public Resources Code Section 71301) in context and aligned to the CA NGSS, as exemplified in Appendix 2.</p>	<p><u>EP&amp;CIIIb</u> <b>SE:</b> Chapter 3, p. 102 Chapter 4, pp. 123-133</p> <p><u>EP&amp;CIIIc</u> <b>SE:</b> Chapter 4, pp. 118-122, 123-133, 134 Chapter 7, pp. 216-226, 227-232 Chapter 16, pp. 528-535 Chapter 23, pp. 806-809</p> <p><b>Digital:</b> <b>Chapter Labs</b> Chapter 4, The Effect of Fertilizer on Algae</p> <p><u>EP&amp;CIVa</u> <b>SE:</b> Chapter 7, pp. 210-215, 216-226, 227-232 Chapter 16, pp. 518-520 Chapter 23, pp. 806-809</p> <p><u>EP&amp;CIVb</u> <b>SE:</b> Chapter 4, pp. 123-133, 134 Chapter 7, pp. 216-226 Chapter 16, pp. 540 Chapter 21, pp. 736-737 Chapter 27, p. 966</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
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<p>Continued</p> <p>Instructional resources, where appropriate, examine humanity's place in ecological systems and the necessity for the protection of the environment (EC Section 60041). Resources include instructional content based upon the Environmental Principles and Concepts developed by the California Environmental Protection Agency and adopted by the SBE (Public Resources Code Section 71301) in context and aligned to the CA NGSS, as exemplified in Appendix 2.</p>	<p><b>Digital:</b> <b>Chapter Labs</b> Chapter 4, The Effect of Fertilizer on Algae</p> <p><u>EP&amp;CIVc</u> <b>SE:</b> Chapter 4, pp. 123-133, 134 Chapter 6, pp. 188-191, 192-197 Chapter 6, p. 198 Chapter 7, pp. 216-226, 227-232 Chapter 24, pp. 880-881</p> <p><u>EP&amp;CVa</u> <b>SE:</b> Chapter 7, pp. 227-232, 233-237, 238 Chapter 16, pp. 536-539, 540 Chapter 23, pp. 814-815 Chapter 24, pp. 854-855</p> <p><u>EP&amp;CVb</u> <b>SE:</b> Chapter 7, pp. 227-232, 233-237, 238 Chapter 16, pp. 536-539</p>			
<p>16. Instructional resources include explanations about human organ and tissue donation, as age and grade-level appropriate, aligned to the relevant standards and related science research (EC Section 33542).</p>	<p><u>Human Organ Donation</u> <b>SE:</b> Chapter 12, p. 413 Technology on the Case Chapter 16 Assessment, p.547, #25</p>			

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		Y	N	
17. Instructional resources, as age and grade-level appropriate, discuss trends and research in science, including medical research, neuroscience and neurological diseases (such as Amyotrophic Lateral Sclerosis, or Lou Gehrig’s disease) and inform students about career pathways in science.	<p><u>Trends and Research in Science</u> <b>SE:</b> Chapter 13, p. 441, Technology on the Case Chapter 16, pp. 521-527, Lesson 16.2 The Process of Genetic Engineering Chapter 16, pp. 528-535, Lesson 16.3 Applications of Biotechnology Chapter 16, p. 535, Forensics Lab</p> <p><u>Medical Research</u> <b>SE:</b> Chapter 11; pp. 349, 371-374; Case Study Chapter 11, pp. 371-373, Frontiers in Stem Cell Research Chapter 11, p. 375, Technology on the Case Chapter 14 pp. 478-479, Performance-Based Assessment Chapter 16, pp. 544-545 Performance-Based Assessment Chapter 18; pp. 591, 612; Case Study</p> <p><u>Neuroscience</u> <b>SE:</b> Lesson 26.1, pp. 893-897, Response Chapter 27, pp. 945-947, The Nervous System Chapter 27 Assessment, p. 974, #41-42</p>			

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		Y	N	
<p>Continued</p> <p>Instructional resources, as age and grade-level appropriate, discuss trends and research in science, including medical research, neuroscience and neurological diseases (such as Amyotrophic Lateral Sclerosis, or Lou Gehrig’s disease) and inform students about career pathways in science.</p>	<p><u>Neurological Diseases</u> <b>SE:</b> Lesson 7.2, p. 226, Heavy Metals Chapter 26, pp. 918-919, Performance-Based Assessment Chapter 27, p. 960, Disease Caused by Toxins Chapter 27, p. 962, Analyzing Data</p> <p><u>Careers in Science</u> <b>SE:</b> Every case study wrap-up has a career component to it. In this feature, students can read about various careers that are associated with the topic of the case study or the chapter topic in general. See for example: Chapter 6, p. 199, Park Ranger Chapter 9, p. 311, Chemical Engineer</p> <p>Chapter 11, p. 375, Forensic Pathologist Chapter 15, p. 507, Computational Biologist Chapter 23, p. 811, Beekeeper</p> <p><u>Engineering</u> <b>SE:</b> Chapter 1, p. 31, Technology on the Case Chapter 9; pp. 293, 301, 310; Case Study Chapter 24, pp. 854-855, Performance-Based Assessment</p>			



Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued Instructional resources, as age and grade-level appropriate, discuss trends and research in science, including medical research, neuroscience and neurological diseases (such as Amyotrophic Lateral Sclerosis, or Lou Gehrig’s disease) and inform students about career pathways in science.	Chapter 25, pp. 884-885, Performance-Based Assessment  <u>Environmental Protection</u> <b>SE:</b> Chapter 7, p. 239, Society on the Case Chapter 8, pp. 286-287, Performance-Based Assessment Chapter 24, pp. 854-855, Performance-Based Assessment Chapter 25; pp. 861, 879, 880; Case Study  <u>Ethics</u> <b>SE:</b> Chapter 1, p. 19, Science, Ethics, and Morality Chapter 15, p. 506, Society on the Case Chapter 16, pp. 536-539, Lesson 16.4 Ethics and Impacts of Biotechnology Chapter 16, p. 547, Chapter Assessment #28  <u>Regulatory Issues</u> <b>SE:</b> Chapter 5, p. 145, Case Study Chapter 11, p. 349, Case Study Introduction Chapter 15, p. 507, society on the Case Chapter 18, p. 613, Society on the Case			

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		Y	N	
Continued Instructional resources, as age and grade-level appropriate, discuss trends and research in science, including medical research, neuroscience and neurological diseases (such as Amyotrophic Lateral Sclerosis, or Lou Gehrig’s disease) and inform students about career pathways in science.	<b>TE:</b> Chapter 5, p. 147, Lead a Discussion Chapter 7, p. 224, Professional Development Chapter 16, p. 538, Case Study Connection Chapter 16, p. 539, Lead a Discussion			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
18. Instructional resources support students to address the applications of science in the development of technologies and in fields such as agriculture, medicine, engineering, and environmental protection. Resources support students to reflect on the interconnections between science, engineering and technology, and to discuss ethical and regulatory issues that can arise when new science and technology allow new capabilities.	<p><u>Agriculture</u> <b>SE:</b> Chapter 1, pp. 34-35 Performance-Based Assessment Chapter 16, p. 541, Technology on the Case Chapter 22, p. 776-777, Performance-Based Assessment Chapter 25, p. 881, Society on the Case</p> <p><u>Medicine</u> <b>SE:</b> Chapter 2, p. 63, Society on the Case Chapter 14, p. 475, Technology on the Case Chapter 15, pp. 492-496, Lesson 15.2, Human Genetic Disorders Chapter 16 pp. 529-533, Health and Medicine Chapter 21, pp. 703, 704, 706, 709, 716, 719, 722, 732; Case Study Chapter 27, pp. 970-971, Performance-Based Assessment</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Instructional resources support students to address the applications of science in the development of technologies and in fields such as agriculture, medicine, engineering, and environmental protection. Resources support students to reflect on the interconnections between science, engineering and technology, and to discuss ethical and regulatory issues that can arise when new science and technology allow new capabilities.</p>	<p><u>Engineering</u> <b>SE:</b> Chapter 1, pp. 34-35, Performance-Based Assessment Chapter 7, pp. 242-243, Performance-Based Assessment Chapter 9, pp. 293, 297, 299, 301, 308, 310; Case Study</p> <p><u>Environmental Protection</u> <b>SE:</b> Chapter 6, pp. 179, 180, 186, 197, 198; Case Study Chapter 8, p. 286-287, Performance-Based Assessment Chapter 24, pp. 854-855, Performance-Based Assessment Chapter 25, pp. 861, 863, 879, 880, Case Study</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>19. Instructional resources engage students in the SEPs. Teacher resources will include discussion of expendable and permanent equipment and materials necessary to conduct activities, guidance on obtaining those materials inexpensively, recycling or disposing of materials, and explicit instructions for organizing and safely conducting instruction, labs and activities. (Aligned to the Science Safety Handbook for California Public Schools, California Department of Education [CDE] 2014).</p>	<p>Support for the Science and Engineering Practices can be found in student edition end matter in the Science and Engineering Practices handbook, pp. A-8—A-33. They are also woven into chapter assessments, labs, case studies, and performance-based assessments as listed below.</p> <p><b>SEP1</b> <u>Asking Questions:</u> <b>SE:</b> Chapter 5, p. 157, Analyzing Data #3 Chapter 8, p. 255, Quick Lab #4 Chapter 14, p. 474, Case Study Wrap-Up #1</p> <p><u>Defining Problems:</u> <b>SE:</b> Chapter 1, p. 30, Case Study Wrap-Up #1 Chapter 6, p. 191, Lesson Review #4 Chapter 8, p. 286, Performance-Based Assessment #1</p> <p><b>SEP2</b> <u>Developing and using models</u> <b>SE:</b> Chapter 2, p. 67, Performance-Based Assessment #3 Chapter 3, p. 87, Quick Lab #1 Chapter 18, p. 596, Lesson Review #5</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Instructional resources engage students in the SEPs. Teacher resources will include discussion of expendable and permanent equipment and materials necessary to conduct activities, guidance on obtaining those materials inexpensively, recycling or disposing of materials, and explicit instructions for organizing and safely conducting instruction, labs and activities. (Aligned to the Science Safety Handbook for California Public Schools, California Department of Education [CDE] 2014).</p>	<p><b>SEP3</b> <u>Planning and carrying out investigations</u> <b>SE:</b> Chapter 9, p. 317, Chapter Assessment #20 Chapter 10, p. 335, Quick Lab #3 Chapter 12, p. 404, Lesson Review #4</p> <p><b>SEP4</b> <u>Analyzing and interpreting data</u> <b>SE:</b> Chapter 5, p. 176, Chapter Assessment #33 Chapter 6, p. 202, Performance-Based Assessment #1 Chapter 12, p. 403, Analyzing Data</p> <p><b>SEP5</b> <u>Using mathematics and computational thinking</u> <b>SE:</b> Chapter 8, p. 290, Chapter Assessment #41-44 Chapter 9, p. 315, Performance-Based Assessment #1 Chapter 10, p. 323, Analyzing Data #1-2</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Instructional resources engage students in the SEPs. Teacher resources will include discussion of expendable and permanent equipment and materials necessary to conduct activities, guidance on obtaining those materials inexpensively, recycling or disposing of materials, and explicit instructions for organizing and safely conducting instruction, labs and activities. (Aligned to the <i>Science Safety Handbook for California Public Schools</i>, California Department of Education [CDE] 2014).</p>	<p><b>SEP6</b> <u>Constructing Explanations:</u> <b>SE:</b> Chapter 1, p. 37, Assessment #22 Chapter 2, p. 54, Analyzing Data #1 Chapter 14, p. 462, Lesson Review #6</p> <p><u>Designing Solutions:</u> Chapter 4, p. 134, Case Study Wrap-Up #2 Chapter 7, p. 226, Lesson Review #7 Chapter 23, p. 810, Case Study Wrap-Up #3</p> <p><b>SEP7</b> <u>Engaging in argument from evidence</u> <b>SE:</b> Chapter 9, p. 317, Chapter Assessment #30 Chapter 11, p. 374, Case Study Wrap-Up #2 Chapter 13, p. 429, Lesson Review #5</p> <p><b>SEP8</b> <u>Obtaining, evaluating, and communicating information</u> <b>SE:</b> Chapter 5, p. 176, Chapter Assessment #35 Chapter 10, p. 343, Performance-Based Assessment #5 Chapter 17, p. 588, Chap. Assessment #40</p>			

Science Content/ Alignment with Standards	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Instructional resources engage students in the SEPs. Teacher resources will include discussion of expendable and permanent equipment and materials necessary to conduct activities, guidance on obtaining those materials inexpensively, recycling or disposing of materials, and explicit instructions for organizing and safely conducting instruction, labs and activities. (Aligned to the <i>Science Safety Handbook for California Public Schools</i>, California Department of Education [CDE] 2014).</p>	<p><u>Equipment and Materials</u></p> <p><b>SE:</b> Chapter 1, p. 29 Lab Skills Handbook, pp. A-1—A-7</p> <p><b>TE:</b> Front Matter, pp. TE59-TE60, Quick Lab Materials List</p> <p>Each Quick Lab and Chapter Lab teacher note has a materials list and safety notes where appropriate.</p> <p><b>Digital</b> Chapter 1, Lesson 3 Interactivity, Safety in the Lab</p>			
<p>20. Instructional resources include opportunities for reflection on the nature and history of science and on their science learning as indicated in the CA Science Framework.</p>	<p><u>Reflect on the Nature of Science</u></p> <p><b>SE:</b> Chapter 1, p. 10, 18, 27, Check Points Chapter 12, p. 419, Chapter Assessment #26 Chapter 17, p. 566, Lesson Review #6</p> <p><u>Reflect on History of Science</u></p> <p><b>SE:</b> Chapter 8, p. 255, Check Point Chapter 8, p. 259, Lesson Review #4 Lesson 12.1, pp. 390-394, The Work of Gregor Mendel Chapter 17, p. 557, Check Point</p>			



**Category 2: Program Organization**

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
1. Sequential organization of the material provides structure concerning what students should learn each year and allows teachers to convey the science content incorporating the three-dimensional learning expressed in the CA NGSS.	Each chapter is presented in a logical order and PEs are bundled in a cohesive way to create 6 units. <i>California Biology: The Living Earth</i> is built on three-dimensional learning and examples are referenced in criteria 1.2, 1.4, 1.5.			
2. Instructional resources support teacher questioning strategies as a tool to assess students' knowledge and skills, promote student-to-student discourse, and guide student learning.	<p>The TE side notes contain many resources and prompts to help teachers assess student knowledge, begin conversations, and guide student learning. There are also quick Check Point questions that can be found in the SE that teachers can use as formative assessments or review.</p> <p><u>Assess Knowledge and Skills</u> <b>SE:</b> Chapter 9, p. 296, Check Point Chapter 15, p. 503, Check Point Chapter 23, p. 794, Check Point</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued Instructional resources support teacher questioning strategies as a tool to assess students' knowledge and skills, promote student-to-student discourse, and guide student learning.	<p><b>TE:</b> Chapter 3, p. 78, Activate Prior Knowledge Chapter 10, p. 334, Assess on the Spot Chapter 11, p. 363, Assess on the Spot</p> <p><u>Promote Student Discourse</u> <b>TE:</b> Chapter 5, p. 147, Lead a Discussion Chapter 14, p. 452, Activate Prior Knowledge Chapter 19, p. 629, Lead a Discussion</p> <p><u>Guide Student Learning</u> <b>TE:</b> Chapter 8, p. 256, Use Visuals Chapter 13, p. 427, Build Science Skills Chapter 18, p. 594, Case Study Connection</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
3. Instructional resources explicitly state which knowledge and skills learned in prior grades or units are applied and extended to accommodate new knowledge and skills.	<p><b>TE:</b> At the beginning of each lesson there is a feature titled Activate Prior Knowledge. This feature can be used to assess what students already know about the lesson topic.</p> <p><b>Realize:</b> Each lesson has a Connect activity which helps to gauge prior knowledge and student understanding of the lesson content. These activities might include a class discussion prompt, a video, a discussion board prompt, or a quick, short hands-on activity.</p> <p><b>Assessment:</b> There is a Pre/Post Test for the program which can be used to assess students' prior knowledge and understanding of the content at the beginning of the school year.</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
4. Teacher resources provide support to engage students in three-dimensional learning and suggest research-based strategies to elicit student thinking and support student discourse.	<p>In the TE, the chapter opener pages give an outline of the PE's covered, as well as how to integrate the three dimensions into the chapter. Each chapter also closes with a three-dimensional assessment that aims to help students prepare for standardized testing.</p> <p>There are ample opportunities for teachers to help students engage in scientific thinking and discourse listed in the TE throughout the chapters. Some of these features include: Activate Prior Knowledge, Assess on the Spot, Build Science Skills (these are all linked to an SEP), Act as a Facilitator, Teacher Demos, Lead a Discussion, and Use Visuals.</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Teacher resources provide support to engage students in three-dimensional learning and suggest research-based strategies to elicit student thinking and support student discourse.</p>	<p><u>Engage in 3-D Learning</u></p> <p><b>TE:</b> Chapter 3, p. 77, Integrate the Three Dimensions Chapter 7, p. 209, Integrate the Three Dimensions Chapter 13, p. 423, Integrate the Three Dimensions Chapter 17, p/ 589, Three-Dimensional Assessment Chapter 20, p. 697, Three-Dimensional Assessment Chapter 24, p. 859, Three-Dimensional Assessment</p> <p><u>Elicit Student Thinking/ Discourse</u></p> <p><b>TE:</b> Chapter 2, p. 42, Activate Prior Knowledge Chapter 5, p. 150, Assess on the Spot Chapter 7, p. 215, Facilitator Chapter 14, p. 453, Use Visuals Chapter 18, p. 610, Build Science Skills Chapter 19, p. 629, Lead a Discussion</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
5. The instructional resources are grade-level specific and provide instructional content for 180 days of instruction for at least one daily class period, including an estimate of the necessary instructional time.	<p>In the teacher edition, each lesson begins with a lesson plan overview and a guide to help teachers who are short on time that outlines the necessary pieces of the lesson.</p> <p><b>TE:</b> Pacing Guide, pp. TE85-TE96 Lesson 8.2 Lesson Plan Overview, p. 260 Lesson 15.1 Lesson Plan Overview, p. 486</p>			
6. The content is well organized and presented in a manner consistent with providing all students an opportunity to achieve the essential knowledge and skills described in the CA NGSS and the <i>CA Science Framework</i> .	<p><i>California: The Living Earth/Biology</i> presents the CA NGSS in a logical progression of bundled Performance Expectations. All essential knowledge and skills are presented and reinforced via multiple and varied means with opportunities for differentiated instruction through the student edition, hands-on labs, and interactivities.</p> <p>Specific content examples from the Three-Course and Four-Course models have been included and examples are listed.</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>The content is well organized and presented in a manner consistent with providing all students an opportunity to achieve the essential knowledge and skills described in the CA NGSS and the <i>CA Science Framework</i>.</p>	<p><b>TE:</b> CA NGSS Correlations, pp. TE16-TE42 Common Core State Standards for English Language Arts, Literacy, and Math in Science Correlation, pp. TE43-TE48 English Language Development Standards Correlation, pp. TE49-TE58 <u>3-Course Model Knowledge</u> <b>SE:</b> Lesson 4.3, p. 132 (the phosphorus cycle and DNA) Lessons 13.1, 13.2, pp. 424-435 (historical approach to the study of DNA) Lesson 20.2, p. 670 (banded iron formation) Chapter 6 3-Dimensional Assessment, p. 207 (sea star wasting syndrome) <u>4-Course Model Knowledge</u> <b>SE:</b> Lesson 15.2, p. 496 (sickle cell allele and malaria resistance) Chapter 24 Assessment #39, p. 856 (snapshot on animal behavior) Chapter 27 3-Dimensional Assessment, p. 975 (tuberculosis)</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>7. Resources include explanations to teachers regarding how the SEPs, DCIs, and CCCs work together to support students in making sense of phenomena and/or to design solutions to problems and build toward the PEs of the CA NGSS. Teacher resources support understanding of how PEs are developed within units and across units throughout a year.</p>	<p>The TE is full of resources that help teachers understand how to utilize all three dimensions of NGSS learning. The examples below include materials from the front matter of the TE that introduce students to the NGSS organization of the book, as well as pages within each chapter that include tips on how to teach three-dimensionally.</p> <p><b>TE:</b> Front Matter, pp. TE6-TE15 Chapter 7, p 209, Integrate the Three Dimensions Chapter 15, p. 555, Integrate the Three Dimensions</p> <p>The information about PE development within and across units can be found in the Unit pages. They include guiding questions, phenomena, California spotlights, and cross-cutting concepts.</p> <p><b>SE:</b> Unit 2, 74-75, California Spotlight Unit 3, p. 249 Cross Cutting Concepts Unit 5, p. 551, Guiding Questions</p>			



Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
8. Topics selected for in-depth study are developed through their role in explaining selected phenomena, chosen to support students in building the knowledge and abilities needed to achieve proficiency in a bundle of PEs.	<p>Each chapter in <i>California: The Living Earth/Biology</i> kicks off with a Case Study. The Case Study presents a phenomenon for students to investigate, a problem to solve, or an engineering task to complete. As students move through the lessons in the chapter, they are given more and more information regarding the topic through figures, interactivities, review questions, and text. By the end of the chapter, they can solve the problem or design their solution. Many Case Studies master or help students to master PE.</p> <p>Each unit opener contains features called California Spotlights that study a larger phenomenon that connects chapters within that unit together.</p> <p><b>SE Case Studies:</b> Chapter 8, pp. 253, 266, 280, 382 Chapter 16, pp. 517, 519, 526, 530, 537, 539, 540 Chapter 18, pp. 591, 594, 598, 603, 612</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued Topics selected for in-depth study are developed through their role in explaining selected phenomena, chosen to support students in building the knowledge and abilities needed to achieve proficiency in a bundle of PEs.	<b>SE/TE:</b> Unit 1, California Spotlight, pp. 3-5 Unit 2, California Spotlight, pp. 73-75 Unit 4, California Spotlight, pp. 385-387 Unit 5, California Spotlight, pp. 551-553			
9. Resources encourage the meaningful use of technologies such as video clips or computer simulations to investigate phenomena that cannot be directly experienced in the classroom; effective measuring tools (computer linked thermometer or range-finder, digital scales, etc.); and spreadsheets and other software to record, display, and analyze data, etc. In these contexts, the materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.	<u>Simulations</u> <b>SE/TE:</b> Chapter 1, pp. 34-35, Performance-Based Assessment Chapter 6, pp. 202-203, Performance-Based Assessment Chapter 18, p. 612, Case Study Wrap-up  On both the chapter planner spread and lesson opener pages, all of the various digital assets including videos, simulations, and animations are listed and referenced at point of use.			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Resources encourage the meaningful use of technologies such as video clips or computer simulations to investigate phenomena that cannot be directly experienced in the classroom; effective measuring tools (computer linked thermometer or range-finder, digital scales, etc.); and spreadsheets and other software to record, display, and analyze data, etc. In these contexts, the materials support teachers as they introduce students to computational thinking and provide guidance to teachers on how science instruction may be improved by the effective use of library media centers and information literacy skills.</p>	<p><b>TE:</b> Chapter 13, pp. 484A-484B, Chapter Planner Chapter 13, Lesson 1, p. 486, Lesson Opener Chapter 15, pp. 422A-422B, Chapter Planner Chapter 24, Lesson 3, p. 838, Lesson Opener Chapter 25, pp. 860A-860B, Chapter Planner <u>Videos</u> There are various videos used throughout the program to aid in student instruction. Unit 2, Chapter 3 is an example below. <b>Realize:</b> Unit 2, Author Connections Video Chapter 3, Lesson 1 Video Chapter 3, Lesson 2 Video Chapter 3, Lesson 2 Interactive Video Chapter 3, Lesson 3 Video Chapter 3, Chapter Close, HHMI Career Video Chapter 3 Enrichment, HHMI Enrichment Video (Parts 1, 2, 3)</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
10. Resources suggest appropriate engineering design tasks in varied contexts as a path to understanding and applying the science ideas being learned. Where appropriate, resources suggest computational tools and software to support the design process and allow students to model or simulate their designed products.	<p><u>Engineering Design</u> <b>SE/TE:</b> Chapter 1, pp. 34-35, Performance-Based Assessment Chapter 3, p. 102, Case Study Wrap-Up Chapter 25, pp. 884-885, Performance-Based Assessment End matter, Science and Engineering Handbook: pp. A-8-- A-33 Appendix B, Technology and Design, pp. A-36-A-37</p> <p><b>Realize/Digital:</b> Chapter 1, Lesson 2, Engineering Interactivity Chapter 4, Lesson 3, Engineering Interactivity Chapter 6, Lesson 3, Engineering Interactivity Chapter 7, Lesson 1, Engineering Interactivity Chapter 9, Lesson 3, Interactivity</p> <p><b>Realize/Print:</b> Chapter 26, Chapter Lab</p> <p><b>Explorers Journal:</b> Unit 1, STEM Project Unit 3, STEM Project</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
11. Teacher resources include references to where related supplemental open educational resources may be found.	<p>Supplemental activities are included in the TE wrap, and these activities often include external sources for students to utilize.</p> <p><b>TE:</b> Chapter 2, p. 63, Extend the Case Chapter 4, p. 135, Extend the Case Chapter 5, p. 170, Teach with Technology</p>			
12. Ancillary and support resources are an integral part of the instructional program and are clearly aligned with the CA NGSS.	<p><i>CA Biology: The Living Earth</i> includes the following CA NGSS aligned resources in addition to the student edition.</p> <p><b>Biology Foundations Reading and Study Workbook:</b> Includes lesson summaries and reading tips that closely align with content in the student edition.</p> <p><b>Explorer’s Journal:</b> Provides unit level problem-based learning projects that help with mastery of PEs.</p> <p><b>Assessment:</b> All lesson quizzes, chapter tests, and three-dimensional assessments are aligned with and lead towards mastery of PEs.</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Ancillary and support resources are an integral part of the instructional program and are clearly aligned with the CA NGSS.</p>	<p><b>Instructional Videos</b> Author Connections Videos at each unit referenced in SE/TE. Videos can be found on Realize.</p> <p><b>Realize:</b> Unit 1 Resources and Explorer’s Journal, Author Connection Video Unit 2 Resources and Explorer’s Journal, Author Connection Video Unit 3 Resources and Explorer’s Journal, Author Connection Video</p> <p><b>Enrichment Activities/Videos for Each Chapter</b> <b>Realize:</b> Chapter 12, Chapter Close, Career Video Chapter 12, Enrichment, HHMI Enrichment Video Chapter 12, Enrichment, HHMI Enrichment Activity Chapter 13, Enrichment, HHMI Enrichment Activity Chapter 19, Enrichment, HHMI Enrichment Video</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
13. Course descriptions are aligned to a specific progression of courses across each grade band so that students completing the course sequence can meet all grade band CA NGSS PEs. The progression builds ideas in a planned sequence, so that each unit builds progressively on prior learning. The logic of the progression is described and explained in teacher resources.	<p><b>SE/TE:</b> Content is developed from the first unit through the last unit. All required life science PEs as well as those earth science PEs required for three-course model are met.</p> <p>Within each unit opener in the TE, an overview of the chapters is given so that teachers understand the logic of the progression.</p>			
14. Suggested student tasks, including end-of-chapter or culminating problems and exercises, are three-dimensional in nature and build in complexity throughout the year and across years.	<p>All of the California Spotlight problem-based learning projects are three-dimensional in nature and build in complexity. See Unit 2 California Spotlight for examples listed: <b>SE:</b> pp. 74-75 <b>TE:</b> pp. 74, 74A, 74B, and 75.</p> <p><b>Explorers Journal:</b> Unit 2, Video Worksheet, Invasive Toads Problem Launch, Invasives in Your Neighborhood Interactivity Worksheet, Pythons in the Everglades STEM Project, Controlling Local Invasives Authentic Reading, <i>To Tame a Wave of Invasive Bugs</i>, Park Service</p>			

Program Organization	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued Suggested student tasks, including end-of-chapter or culminating problems and exercises, are three-dimensional in nature and build in complexity throughout the year and across years.	<i>Introduces Predator Beetles</i> Interactivity Worksheet, Controlling Invasives Problem Wrap-up  <b>Digital:</b> Unit 2, Video, Invasive Toads Interactivity, Food Webs and Invasives Interactivity, Pythons in the Everglades Interactivity, Controlling Invasives Problem Wrap-up			



**Category 3: Assessment**

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>1. Assessments in the instructional resources reflect the three-dimensional nature of the CA NGSS and the <i>CA Science Framework</i>. Assessment tools measure what students know and are able to do, as defined by the PEs in the CA NGSS. Assessments stress performance tasks rather than rote memorization.</p>	<p>The NGSS PE are assessed in many different ways throughout the program. Each of the examples listed below masters a PE.</p> <p><b>Performance-Based Assessments:</b> Chapter 6, pp. 202-203 Performance-Based Assessment (HS-LS2-2) Chapter 18, p. 612, Case-Study Wrap Up (HS-LS4-4) Chapter 26, pp. 918-919, Performance-Based Assessment (HS-LS1-2)</p> <p><b>Labs:</b> Chapter 5, p. 150, Chapter Lab (HS-LS2-1) Chapter 4, p. 121, Quick Lab (HS-LS2-4) Chapter 17, p. 565, Quick Lab (HS-LS4-2)</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
2. Entry-level assessments for each unit are provided to help teachers elicit students' prior knowledge and preconceptions and gauge their facility for using the SEPs and CCCs. Information is provided to teachers to help them use the results of those assessments to guide instruction and to determine modifications for specific students or groups of students.	Each lesson in the TE contains a CONNECT activity that prepares students for the lesson. These activities utilize discussion boards, videos, or warm-up labs with a goal of activating prior knowledge or addressing preconceptions.			
Continued Entry-level assessments for each unit are provided to help teachers elicit students' prior knowledge and preconceptions and gauge their facility for using the SEPs and CCCs. Information is provided to teachers to help them use the results of those assessments to guide instruction and to determine modifications for specific students or groups of students.	<b>TE:</b> Chapter 7, p. 216, Activate Prior Knowledge Chapter 9, p. 294, Activate Prior Knowledge Chapter 15, p. 486, Activate Prior Knowledge  <b>Realize:</b> In the Course Level Tests folder, there is a Pre/Post Test that contains questions from each unit. This test can be administered at the beginning of the year to gauge students' knowledge and help guide instruction.			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>3. Teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.</p>	<p>The TE side notes have varied assets that instruct teachers on how to engage their class with the content. These activities include discussion boards and Assess on the Spot prompts, as well as Up Close or Visual Analogy questions that analyze figures from the SE. These can be found throughout the entire book.</p> <p>In addition, there are Interactivities sprinkled throughout the lessons in the SE that can be used as formative assessments. In the corresponding TE pages, there are short guidelines for teachers that include a description of the activity, or a suggestion to focus the students' attention on a particular piece of the interactivity.</p> <p>There are also question prompts sprinkled throughout the TE wrap that can be used as quick, formative assessments.</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued Teacher materials provide support to engage students in tasks that afford both learning and formative assessment opportunities at the same time and provide guidance to teachers on how to embed formative assessment activities in the broader learning activity.	<b>TE:</b> Lesson 8.2, p. 261, Visual Analogy Lesson 12.2, p. 395, Activate Prior Knowledge Warm-Up Lab Lesson 17.3, p. 568, Simulation Lesson 20.3, p. 680, Assess on the Spot			
4. Brief formative assessment tools and practices at key stages in the unit of instruction are designed to elicit current understandings and preconceptions and to provide evidence of students' progress toward mastering the three-dimensional learning called for in the CA NGSS and the <i>CA Science Framework</i> . In addition to providing formative assessment tools, instructional materials must also provide teachers with strategies of how to address preconceptions during instruction. These strategies are to be differentiated for different age levels.	Formative assessment tools are built into the TE in many places. Most features in the lesson wrap pages can serve as formative assessments. Examples include: Use Visuals, Assess on the Spot, Lead a Discussion, and Build Science Skills. Each lesson also has a quick review that consists of 3-8 questions and an Evaluate Student Progress activity.  Preconceptions are addressed in most chapters during the lessons, and instructions are included to help teachers correct students' knowledge. <u>Formative Assessment</u> <b>TE:</b> Chapter 14, p. 456, Lesson Review Chapter 17, p. 565, Assess on the Spot Chapter 25, p. 872, Use Visuals			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Brief formative assessment tools and practices at key stages in the unit of instruction are designed to elicit current understandings and preconceptions and to provide evidence of students' progress toward mastering the three-dimensional learning called for in the CA NGSS and the <i>CA Science Framework</i>. In addition to providing formative assessment tools, instructional materials must also provide teachers with strategies of how to address preconceptions during instruction. These strategies are to be differentiated for different age levels.</p>	<p><u>Preconceptions</u></p> <p><b>TE:</b> Chapter 1, p. 10, Address Preconceptions Chapter 5, p. 155, Address Preconceptions Chapter 10, p. 324, Address Preconceptions</p>			
<p>5. Assessments should yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards.</p>	<p>All of the assessments are accompanied with answer keys that teachers can use to help guide their students to full understanding of the content and standards. The answer keys for benchmark tests and the end-of-course assessment are written in the CAST style, and include the following for each question: PE, SEP, DCI, CCC, DOK, and an ILCS statement that connects the question to the related NGSS standards. This information can be used to help teachers plan or modify instruction based on student needs.</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued Assessments should yield information teachers can use in planning and modifying instruction to help all students meet or exceed the standards.	Remediation documents are included for chapter tests, lesson quizzes, and benchmark tests, which serve as review documents for students or teachers. These documents detail the possible answer choices for each question, and explains why the correct answer is correct, as well as why the incorrect answers are incorrect. Both answer keys and remediation documents can be found on Realize.			
6. Teacher resources supply a differentiated path for diverse students to build toward the PEs of the CA NGSS. In particular, formative assessment tasks are designed to support teachers in collecting and analyzing data about student conceptual understanding.	Each lesson contains multiple features that outline how a teacher can differentiate the instruction of the content. Some of these involve a form of formative assessment so that teachers can gauge student progress. Teachers can easily collect student work and analyze the results.  <b>TE:</b> Chapter 6, p. 196, Differentiated Instruction, Support Less Proficient Readers Chapter 16, p 522, Differentiated Instruction, Support Struggling Students Chapter 22, p. 746, Differentiated Instruction, Support Special Needs			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>7. Summative assessments designed to provide valid, reliable and fair measures of students' progress and attainment of three-dimensional learning after a period of instruction (for example at the end of a chapter, unit, or course) should involve multi-component tasks including, but not limited to: hands-on or simulation-based performance tasks, open-ended constructed response problems, and scoring of portfolios of student work collected over the course of instruction. Selected-response items, if used, should require analysis and reasoning to answer them, rather than simply memorized responses.</p>	<p>Assessment is woven into every aspect of this program. Each lesson concludes with 4-8 traditional review questions, and every chapter has a summative review section with questions for the lessons as well as critical thinking questions that encompass overall themes from the entire chapter. These critical thinking constructed response questions were written to assess student's knowledge of the DCI through the use of SEP and CCC. Each question has a run-in head that specifies the SEP or CCC being addressed.</p> <p>PEs are often assessed through hands-on labs or the two authentic assessment types that accompany each chapter: Case Studies and Performance-Based Assessments. Case Studies are introduced at the start of each chapter and explain a biological phenomenon in the form of a question. The students are then given snippets of pertinent information throughout the chapter to slowly help students understand the phenomena.</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Summative assessments designed to provide valid, reliable and fair measures of students' progress and attainment of three-dimensional learning after a period of instruction (for example at the end of a chapter, unit, or course) should involve multi-component tasks including, but not limited to: hands-on or simulation-based performance tasks, open-ended constructed response problems, and scoring of portfolios of student work collected over the course of instruction. Selected-response items, if used, should require analysis and reasoning to answer them, rather than simply memorized responses.</p>	<p>At the end of the chapter, students will be asked to explain the phenomena with evidence from the chapter. Performance-Based Assessments are authentic activities that have students use SEP to carry out a project.</p> <p>Each chapter closes with a three-dimensional assessment that prepares students for the CAST. These assessments are three-dimensional by nature, and include tables to show which PE, DCI, SEP, and CCC is hit by each question. One assessment is available in the print SE, and there is a second available on TestNav, which contains technology-enhanced items that directly mirror the CAST style.</p> <p>If teachers are looking to collect and grade work throughout the year, the Explorers Journal, which is a guided Project-Based Learning book, can be utilized. Each unit has a problem to be solved, and the consumable booklet guides students through activities, labs, authentic readings, and eventually</p>			



Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Summative assessments designed to provide valid, reliable and fair measures of students' progress and attainment of three-dimensional learning after a period of instruction (for example at the end of a chapter, unit, or course) should involve multi-component tasks including, but not limited to: hands-on or simulation-based performance tasks, open-ended constructed response problems, and scoring of portfolios of student work collected over the course of instruction. Selected-response items, if used, should require analysis and reasoning to answer them, rather than simply memorized responses.</p>	<p>lets them solve the problem in a unique way. Teachers can easily monitor student's work throughout the process.</p> <p>In addition, there are lesson quizzes, chapter tests, benchmark tests (one per unit), and end-of-course assessments available for digital download on Realize. These documents can be modified, printed, and collected to gauge student progress.</p> <p><b>SE/TE:</b> Chapter 10, pp. 342-343, Performance-Based Assessment Chapter 13, p. 440, Case Study Wrap-Up Chapter 14, p. 478-479, Performance-Based Assessment Lesson 17.1, p. 560, Lesson Review Chapter 24, pp. 854-855, Performance-Based Assessment</p> <p><b>Explorers Journal:</b> Unit 2, EJ pp. 37-41, Problem Launch Unit 3, EJ pp. 77-83, STEM Project Unit 4, EJ pp. 100-102, Lab Investigation</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
8. Students' progress toward meeting the three-dimensions of the CA NGSS is assessed through both writing and performance tasks. Student written responses are consistent with the grade-level writing and mathematics requirements in the <i>CA CCSS for ELA/Literacy and the CA CCSSM</i> .	<p>In the Chapter Assessment, students are asked to utilize reading, writing, and mathematical skills to build upon the content. These are under the headings Math Connections and Language Arts Connections. Each question is aligned to either the CA CCSS for ELA/Literacy or the CA CCSSM Math Practices.</p> <p><u>Writing and Literacy</u> <b>SE:</b> Chapter 10 Assessment, p. 346, #41-42 Chapter 13 Assessment, p. 448, #36-37 Chapter 24 Assessment, p. 858, #51-52</p> <p><u>Math</u> <b>SE:</b> Chapter 6 Assessment, p. 206, #34-36 Chapter 12 Assessment, p. 420, #33 Chapter 26 Assessment, p. 922, #39-41</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Students' progress toward meeting the three-dimensions of the CA NGSS is assessed through both writing and performance tasks. Student written responses are consistent with the grade-level writing and mathematics requirements in the <i>CA CCSS for ELA/Literacy and the CA CCSSM</i>.</p>	<p><b>Realize, Program Resources folder, Skills Activities:</b>                      HHMI Activity: Formulae, Functions, and Averages                      HHMI Activity: Autofill Data, Cell References, and Standard Deviation                      HHMI Activity: Column Graphs, Error Bars, and Standard Error of the Mean                      HHMI Activity: t-Test                      HHMI Activity: Histogram</p>			
<p>9. Resources include student work expectations and analytical rubrics for scoring performance tasks and, where possible, examples of student work at each scoring level. Resources include an explanation of the use of rubrics by teachers and students to evaluate the progress of students' models, projects, writing, and progression toward understanding.</p>	<p>The answer keys for Benchmark Tests and End-of-Course assessments include student work expectations for all open-response questions. These can be used by teachers as answer keys as well as providing examples of expected work. Each scoring level includes an exemplar and a rubric. Rubrics are also included in the TE wrap for teachers to utilize for grading purposes or to share with students. Each Performance-Based Assessment features a simple rubric that can be shared with students while they complete the task.</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Resources include student work expectations and analytical rubrics for scoring performance tasks and, where possible, examples of student work at each scoring level. Resources include an explanation of the use of rubrics by teachers and students to evaluate the progress of students' models, projects, writing, and progression toward understanding.</p>	<p><u>Work Expectations and Examples of Student Work</u></p> <p><b>Answer Keys:</b> Unit 3 Benchmark Test, #15 Unit 5 Benchmark Test, #12 End-of-Course Assessment, #29</p> <p><b>Rubrics</b> <b>TE:</b> Chapter 1, pp. 35 Performance-Based Assessment Chapter 13, p. 445 Performance-Based Assessment Chapter 25, pp. 884-885 Performance-Based Assessment</p>			
<p>10. Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the <i>CA Science Framework</i>, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.</p>	<p>Multiple and varied types of assessment are utilized in this program. Performance-Based Assessments ask students to create or model an answer to a question using presentations. Each chapter has three labs of varying intensity that have students apply practical skills to enhance their understanding of the content. Traditional assessments are offered as well, including lesson quizzes, chapter tests, a benchmark test for each unit, and end-of-course test, and standardized test prep in the form of three-dimensional assessments.</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the <i>CA Science Framework</i>, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.</p>	<p>These assessments contain open ended, short answer, and multiple-choice questions, that if accessed in the online course also include technology-enhanced items that engage students outside the bounds of the usual paper-based assessments.</p> <p><u>Engineering Design</u> <b>SE:</b> Chapter 24, p. 854-855, Performance-Based Assessment Chapter 26, p. 914, Case Study Wrap-Up <b>TE:</b> Chapter 26, p. 915, Build Science Skills</p> <p><u>Practical Labs</u> <b>SE:</b> Chapter 3, p. 83, Modeling Lab Chapter 8, p. 273, Exploration Lab Chapter 26, p. 896, Quick Lab</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Assessment tools include multiple measures of student performance as addressed in the assessment chapter in the <i>CA Science Framework</i>, including, but not limited to, engineering design and lab practical tasks; performance-based tasks; open-ended, short answer and essay responses; lab reports; research projects; computational simulations; and oral presentations.</p>	<p><u>Performance-Based Tasks</u> <b>SE:</b> Chapter 6, pp. 202-203, Performance-Based Assessment Chapter 19, pp. 646-647, Performance-Based Assessment Chapter 25, pp. 884-885, Performance-Based Assessment</p> <p><u>Open Ended, Short Answer, and Essay</u> <b>SE:</b> Chapter 5, p. Performance-Based Assessment #5 Chapter 10, p. 347, Three-Dimensional Assessment #3 Lesson 16.1, p. 520, Review #4</p> <p><u>Research</u> <b>TE:</b> Chapter 11, p. 353, Build Writing Skills Chapter 14, p. 474, Case Study Wrap-Up - Build Writing Skills Chapter 25, p. 880, Differentiated Instruction – Advanced Students</p> <p><u>Oral Presentations</u> <b>SE:</b> Chapter 18, p. 617, Performance-Based Assessment</p>			

Assessment	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued	<b>TE:</b> Chapter 13, p. 440, Case Study Wrap-Up - Act as a Facilitator Chapter 15, p. 501, Differentiated Instruction - Advanced Students			
11. Assessment tools include guidance on measuring students' ability to apply information literacy skills when obtaining and evaluating information about science topics.	<b>Realize</b> Program Resources: Evaluating an Online Resource Website Authority: Domain Names Evaluating Information Rubric			

**Category 4: Access and Equity**

Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
1. The instructional resources should reflect the goals of access and equity outlined in chapter 10 of the <i>CA Science Framework</i> .	The instructional resources all support the goals of access and equity outlined in chapter 10. There is Tier 1 instruction and support throughout the teacher’s edition. In addition, there is targeted support and strategies for those students who need additional help and support. See specific features and page references in Category 4, Point 4.			
2. At every grade level, suggested lessons and teacher resources will include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.	<p>The full ELD Standards Correlation table can be found in TE pp. TE49-TE58. Representative examples are listed below.</p> <p><u>ELD.PI.9-10.1</u> <b>TE:</b> pp. 50, 230, 519</p> <p><u>ELD.PI.9-10.2</u> <b>TE:</b> 45, 155, 832</p> <p><u>ELD.PI.9-10.3</u> <b>TE:</b> pp. 27, 458</p> <p><u>ELD.PI.9-10.4</u> <b>TE:</b> p. 662</p> <p><u>ELD.PI.9-10.5</u></p>			



Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued At every grade level, suggested lessons and teacher resources will include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.	<p><b>TE:</b> pp. 212, 600, 929 <u>ELD.PI.9-10.6a-c</u></p> <p><b>TE:</b> pp. 88, 466, 912 <u>ELD.PI.9-10.7</u> <b>TE:</b> pp. 537, 877</p> <p><u>ELD.PI.9-10.8</u> <b>TE:</b> pp. 235</p> <p><u>ELD.PI.9-10.9</u> <b>TE:</b> pp. 13,120, 635</p> <p><u>ELD.PI.9-10.10a-b</u> <b>TE:</b> pp. 94, 595, 899</p> <p><u>ELD.P1.9-10.11a-b</u> <b>TE:</b> pp. 20, 301, 670,</p> <p><u>ELD.PI.9-10.12a-b</u> <b>TE:</b> pp. 324, 408, 629</p> <p><u>ELD.PI.11-12.1</u> <b>TE:</b> p. 391</p> <p><u>ELD.PI.11-12.2</u> <b>TE:</b> pp. 131, 399</p> <p><u>ELD.PI.11-12.3</u> <b>TE:</b> p. 353</p>			

Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued At every grade level, suggested lessons and teacher resources will include research-based strategies to address the needs of English learners consistent with the CA ELD Standards.	<p><u>ELD.PI.11-12.4</u> <b>TE:</b> p. 330</p> <p><u>ELD.PI.11-12.5</u> <b>TE:</b> pp. 494, 708, 948</p> <p><u>ELD.PI.11-12.6a-c</u> <b>TE:</b> pp. 115, 558, 801</p> <p><u>ELD.PI.11-12.7</u> <b>TE:</b> pp. 183, 841</p> <p><u>ELD.PI.11-12.8</u> <b>TE:</b> p. 194</p> <p><u>ELD.PI.11-12.9</u> <b>TE:</b> pp. 357, 723, 847</p> <p><u>ELD.PI.11-12.10a-b</u> <b>TE:</b> pp. 489, 791, 869</p> <p><u>ELD.P1.11-12.11a-b</u> <b>TE:</b> pp. 500, 565, 808</p> <p><u>ELD.PI.11-12.12a-b</u> <b>TE:</b> p. 365</p>			

Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
3. Instructional resources incorporate instructional strategies to address the needs of students with disabilities in lessons, assessments, and teacher resources, as appropriate, at every grade level.	Each page in the eText for the students, there is an audio file so that students can have the narrative read to them. The eText can be accessed through Realize.			
4. Teacher resources supply a differentiated path for all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.	<p>The teacher’s edition is developed in a consistent fashion that allows teachers to easily see the different levels of instruction. Examples are listed below but each unit, chapter, and lesson are similar.</p> <p>On each chapter planner spread, there is a feature titled Foundations for Learning which provides a strategy for all students to use a graphic organizer in which to take notes as they work through the chapter. This activity is then referenced again with a strategy on the study guide spread as students prepare for chapter review and assessment.</p>			

Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Teacher resources supply a differentiated path for all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.</p>	<p><b>TE:</b> Chapter 3, p. 76A, Foundations for Learning Chapter 3, p. 105, Foundations for Learning Wrap-Up Chapter 4, p. 112A, Foundations for Learning Chapter 4, p. 137, Foundations for Learning Wrap-Up</p> <p>In addition on the chapter planner, there is a box titled Enrichment which provides additional resources for those students who may be more advanced in their learning.</p> <p><b>TE:</b> Chapter 6, p. 178B Chapter 7, p. 208B Chapter 14, p. 484B Chapter 15, p. 450B</p> <p>Differentiated Instruction boxes throughout the program provides strategies for dealing with various populations of students including: special needs students, struggling students, less proficient readers, and advanced students.</p>			

Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Teacher resources supply a differentiated path for all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.</p>	<p><b>TE:</b> Chapter 17, p. 559, Support Less Proficient Readers and Support Advanced Students Chapter 18, p. 609, Support Struggling Students and Support Advanced Students Chapter 20, p. 672, Support Special Needs Students and Support Advanced Students Chapter 22, p. 754, Support Special Needs Students and Support Struggling Students</p> <p>Assess on the Spot features provide suggestions for doing assessment throughout the lesson and not just waiting until the end of the lesson.</p> <p><b>TE:</b> Chapter 9, p. 300 Chapter 10, p. 334 Chapter 19, p. 632 Chapter 21, p. 707</p> <p>ELD Support boxes are also included once per lesson and provide strategies for three levels of ELD support--Emerging, Expanding, and Bridging. See next entry for page references.</p>			

Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Teacher resources supply a differentiated path for all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.</p>	<p>At the end of each lesson are two opportunities to assess student understanding. The Evaluate Student Progress activity provides an alternate assessment suggestion for the lesson which can be used for any student or as an alternative to the lesson review. The Remediate feature provides a strategy for remediation. For example if a student is struggling with concept X or question X, the feature suggests they go back and review parts of the lesson or perform one of the lesson's digital activities for extra help.</p> <p><b>TE:</b> Chapter 2, p. 46 Chapter 8, p. 259 Chapter 26, p. 901 Chapter 27, p. 944</p>			

Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Teacher resources supply a differentiated path for all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.</p>	<p><b>Biology Foundations/Reading and Study Workbook:</b> This workbook contains different strategies for students who are struggling with content in the student program. These strategies include reading tools, lesson summaries, build vocabulary features, visual reading tools, and a chapter review. While this is geared toward struggling students, all students can use this workbook for review and extra support.</p> <p><b>Realize</b> All Analyzing Data and Quick Lab activities within the student edition are also available on Realize in editable doc format so that they can be easily edited to focus on your students' needs.</p> <p>All Chapter Labs referenced in student edition are provided at two different learning levels--at level and below level and are also in editable format so they can be edited to focus on your students' needs.</p>			

Universal Access	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Teacher resources supply a differentiated path for all students. In particular, instructional resources should provide guidance to support students with special needs, including standard English learners, English learners, long term English learners, students living in poverty, foster youth, girls and young women, advanced learners, students with disabilities and students below grade level in science skills, three-dimensional learning, literacy skills, or mathematics skills.</p>	<p>All lesson assessment and chapter assessments are available in editable doc format so they can be easily customized for your students' needs and level.</p> <p><b>Realize, Program Resources folder, Skills Activities:</b>                      HHMI Activity: Formulae, Functions, and Averages                      HHMI Activity: Autofill Data, Cell References, and Standard Deviation                      HHMI Activity: Column Graphs, Error Bars, and Standard Error of the Mean                      HHMI Activity: t-Test                      HHMI Activity: Histogram</p>			



**Category 5: Instructional Planning and Support**

Instructional Planning and Support	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
1. Program resources include a curriculum guide for the academic instructional year for teachers to follow when planning for 180 days of instruction.	In the front matter of the Teacher's Edition, there is a pacing guide that provides pacing for the program whether district is following a three-course model or a four-course model.  <b>TE:</b> pp.TE85-TE96,1.			
2. The teacher resources provide an estimated instructional time for each activity, lesson, chapter, and unit which allows for student engagement in the SEPs and engineering design projects.	<b>TE:</b> Front Matter; pp.TE85-TE96,1; Pacing Guide  In addition, on each Lesson Opener, there is a Lesson Plan Overview that suggests pacing. See the following examples: 180, 188, 192, 254, 260, 272, 278			
3. The teacher resources provide guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons, if necessary, to ensure three-dimensional learning.	Lesson planning begins with the Pacing Guide, which can be found in the teacher's edition front matter. <b>TE:</b> pp. TE85-TE96, 1  At the unit level, the California Spotlight pages offer pacing information with strategies.			

Instructional Planning and Support	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>The teacher resources provide guidance in daily lessons and units of instruction with appropriate opportunities for checking for understanding and adjusting lessons, if necessary, to ensure three-dimensional learning.</p>	<p><b>TE:</b> Unit 1, pp. 4, 4A, 4B, and 5. Unit 3, pp. 386, 386A, 386B, 387 Unit 5, pp. 700, 700A, 700B, 701.</p> <p>At the chapter level, each chapter planner includes information if you are short on time or only want to cover part of the chapter. Yellow clock icons show which activities are necessary to cover the key content. Using Chapter 1 as an example, see pages 6A-6B.</p> <p>At the lesson level, each lesson has a feature called Lesson Plan Overview, which provides pacing information as well as strategies to emphasize three-dimensional learning.</p> <p><b>TE:</b> Chapter 1, pp. 8, 15, 22 Chapter 4, pp. 114, 118, 123 Chapter 16, pp. 518, 521, 528, 536 Chapter 22, pp. 744, 749, 759</p>			

Instructional Planning and Support	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>4. Program resources address the articulation of three-dimensional learning by identifying the knowledge and skills learned in prior grades and prior grade-level units, and address how to connect and build on these learnings to help students develop increasingly sophisticated ideas.</p>	<p>Each lesson begins with an activity labeled Activate Prior Knowledge (under the Connect heading). These activities provide a suggestion on how to activate and build upon prior knowledge that students have from grades 6-8.</p> <p><b>TE:</b> Chapter 4, pp. 114, 118, 123 Chapter 18, pp. 592, 597, 604, 608 Chapter 24, pp. 822, 828, 838, 844</p>			
<p>5. Teacher resources provide background knowledge about the SEPS, DCIs, and CCCs and discuss the desired level of SEPs in which students will engage, including how the three dimensions are integrated into units and lessons.</p>	<p>Next Generation Science Standards for California Public Schools Correlation. <b>TE:</b> pp. TE16-TE42</p> <p>On each unit opener, a listing of the Crosscutting Concepts and how they are addressed is included.</p> <p><b>TE:</b> Unit 1, p.3 Unit 2, p. 73 Unit 3, p. 249 Unit 4, p. 385 Unit 5, p. 551 Unit 6, p. 699</p>			

Instructional Planning and Support	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>Teacher resources provide background knowledge about the SEPS, DCIs, and CCCs and discuss the desired level of SEPs in which students will engage, including how the three dimensions are integrated into units and lessons.</p>	<p>On each chapter opener, there is a feature titled Integrate the Three Dimensions which focuses on a different PE for each chapter. This feature provides strategies on how to integrate the DCI, SEP, and CCC and which assets to use to master the performance expectation.</p> <p><b>TE:</b> Chapter 1, p. 7 Chapter 7, p. 209 Chapter 14, p. 451 Chapter 21, p. 703</p> <p>Within the lessons you can find strategies to engage the various SEPs and CCCs in the side wrap under the heading Build Science Skills.</p> <p><b>TE:</b> Chapter 1, p. 9, Construct Explanations Chapter 14, p. 455, Develop Models Chapter 9, p. 314, Analyze and Interpret Data Chapter 18, p. 610, Construct Explanations</p>			

Instructional Planning and Support	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
6. All suggested student tasks, including classroom activities, end-of chapter tasks, suggested out-of-school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Assessment keys and rubrics are provided.	<p>All of the suggested student tasks, activities, features, and assessment have both answers and suggestions for implementation in the teacher’s edition in the wrap copy. Note that the teacher support is similar in all chapters.</p> <p>Using chapter 3 as an example, see the wrap around copy on the following pages.</p> <p><b>TE:</b>            Get the Picture, p. 76            Build Science Skills, pp. 79, 81, 86, 93, 94, 96, 97, 103            Answers, Check Point, pp. 79, 80, 82, 88, 89            Case Study Connection, p. 80            Connect to Language Arts, p. 80            Use Visuals, p. 82, 96            Figure question answers, pp. 82, 90, 97            Modeling Lab, p. 83            Lesson Review Answers, pp. 84, 91, 101            Visual Analogy, p. 86            Quick Lab, p. 87            Reading Tool, p. 88            Lead a Discussion, p. 90</p>			

Instructional Planning and Support	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
<p>Continued</p> <p>All suggested student tasks, including classroom activities, end-of chapter tasks, suggested out-of-school activities, and assessment tasks are supported with guidance for the teacher on how to implement and, where appropriate, grade the task. Assessment keys and rubrics are provided.</p>	<p>Connect to Earth Science, p. 95 Analyzing Data, p. 97 Case Study Wrap-up, p. 102 Study Guide, pp. 104-105</p> <p>Performance-based Assessment, pp. 106-107 Chapter Assessment, pp. 108-110 Three-Dimensional Assessment, p. 111</p> <p><u>Assessment Rubrics</u> Most of the Performance-Based Assessment features have rubrics that can be used by both the student and teacher to evaluate work.</p> <p><b>TE:</b> Chapter 1, p. 35 Chapter 8, p. 287 Chapter 17, p. 585 Chapter 23, p. 815</p>			

Instructional Planning and Support	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
7. Teacher and student resources have correlating page numbers in print resources or corresponding references in electronic resources.	<p>Page numbers in the SE and TE are correlated to match. Any additional pages in the TE are denoted by A/B, or in the front matter by TE.</p> <p>The Chapter Planner pages that precede each chapter lists the print and digital resources that are available for each lesson.</p> <p><b>TE:</b> Chapter 3, pp. 76A-76B Chapter 11, pp. 348A-348B Chapter 21, pp. 702A-702B</p> <p>The California Spotlight pages that precede each Unit also list digital and print resources that correlate to the problem-based learning activity. See representative examples on pages:</p> <p><b>TE:</b> Unit 1, pp. 4-5 Unit 2, pp. 74-75 Unit 3, pp. 250-251 Unit 4, pp. 386-387 Unit 5, pp. 550-551 Unit 6, pp. 700-701</p>			

Instructional Planning and Support	Publisher Citations	Criterion Met?		Reviewer Comments, Citations, and Questions
		Y	N	
Continued Teacher and student resources have correlating page numbers in print resources or corresponding references in electronic resources.	In addition, on the lesson opener, there is a box called Online Resources that lists all of the digital resources that are available for the lesson. In the side wrap of the lesson, these digital resources have a point of use box that provides additional information. <b>TE:</b> Lesson 5.2, p. 154 Lesson 10.1, p. 322 Lesson 15.3, p. 497 Lesson 20.1, p. 654			
8. Teacher resources include a planning guide describing the relationships between the components of the program and how to use all the components to meet all of the CA NGSS.	Every chapter in the Teacher's Edition begins with a Chapter Planner spread which lists lesson by lesson all of the assets and features that could be used to teach the lesson. At the lesson level, each lesson opener lists the online resources that are available for the lesson as well as the Lesson Plan Overview which describes a strategy to use to teach the lesson. See representative examples: <b>TE:</b> 76A, 76B, 78, 85, 92, 112A, 112B, 114, 118, 123			



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9. Instructional objectives for three-dimensional learning are explicitly stated and clearly identifiable in the teacher resources. Teacher resources include guidance on explaining these objectives to parents.	Each Lesson Opener contains Lesson Objectives. The lesson objectives correspond to the Key Questions, the main headings within the lesson, and are assessed at the Lesson Review. See representative examples: <b>TE:</b> 78, 114, 146, 154, 160			
10. While learning goals may be explicitly stated in the teacher materials, student resources will provide experiences that clearly build to the development of those learning goals without explicitly stating those goals prior to the instruction. In most cases, prior to instruction, introduce a phenomenon or guiding question or the end result of the lesson series.	Each chapter begins with a one-page Case Study that explains some sort of biological phenomena and a short list of questions that will guide the student through the content. In each lesson, there are Case Study Connections, denoted by orange bars, that link the content to the phenomena.			
Continued While learning goals may be explicitly stated in the teacher materials, student resources will provide experiences that clearly build to the development of those learning goals without explicitly stating those goals prior to the instruction. In most cases, prior to instruction, introduce a phenomenon or guiding question or the end result of the lesson series.	<b>SE:</b> Chapter 5; pp. 144-145, 149, 161, 163, 166, 168-169; Case Study "What can we learn from China?" Chapter 16; pp. 516-517, 519, 526, 530, 537, 538, 539, 540; Case Study "What will the future hold for genetically modified crops?" Chapter 22; pp. 742-743, 748, 753, 755, 758, 770, 772; Case Study "How did plants conquer the land?"			

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11. Lessons include instructional strategies aligned to the CA NGSS, the <i>CA Science Framework</i> and based on current and confirmed research (e.g., teacher facilitated student-led conversations, as well as hands-on activities and laboratories). Resources are clearly connected to and support the goals of the CA CCSSM and CCSS for ELA/Literacy.	<p><u>Language Arts Connections, Write About Science, Read About Science</u> As part of the chapter assessment in each chapter, there is a section titled Language Arts Connections that asks questions that specifically address the CCSS for ELA/Literacy. See representative examples: <b>SE:</b> 110, 142, 176, 206, 246</p> <p><u>Math Connections</u> As part of the chapter assessment in each chapter, there is a section titled Math Connections that asks questions that specifically address the CCSSM. See representative examples: <b>SE:</b> 110, 142, 176, 206, 246</p> <p><u>Build Writing Skills:</u> These features in the side column of the TE provide strategies for teachers to use to help their students build their writing skills. Each feature focuses on a particular writing skill such as <i>Write Explanatory Texts, Write for a Specific Audience, Research and Use Sources</i>, as well as others. See representative examples on pages: <b>TE:</b> 31, 35, 54, 80, 102</p>			

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<p>Continued</p> <p>Lessons include instructional strategies aligned to the CA NGSS, the <i>CA Science Framework</i> and based on current and confirmed research (e.g., teacher facilitated student-led conversations, as well as hands-on activities and laboratories). Resources are clearly connected to and support the goals of the CA CCSSM and CCSS for ELA/Literacy.</p>	<p><u>Build Vocabulary Skills</u> These features in the side column provide strategies for teachers to use to help students build the vocabulary. Each feature focuses on a particular skill such as <i>Suffixes, Word Origins, Multiple Meanings, Related Words, Root Words</i>, and others. See representative examples on pages: <b>TE:</b> 254, 256, 259, 261, 268, 277</p> <p><u>Reading Tool</u> These features in the side column provide additional strategies to help students with the content on the page. See representative examples on pages: <b>TE:</b> 88, 91, 100, 116, 124, 152</p> <p><u>Connect to Math</u> These features in the side column provides strategies to teachers to relate something on the student page with math and provides strategies for the teacher to aid in discussion. See representative examples on pages: <b>TE:</b> 13, 258, 396, 746, 912</p>			

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<p>Continued</p> <p>Lessons include instructional strategies aligned to the CA NGSS, the <i>CA Science Framework</i> and based on current and confirmed research (e.g., teacher facilitated student-led conversations, as well as hands-on activities and laboratories). Resources are clearly connected to and support the goals of the CA CCSSM and CCSS for ELA/Literacy.</p>	<p><b>Realize, Program Resources folder, Skills Activities:</b>                      HHMI Activity: Formulae, Functions, and Averages                      HHMI Activity: Autofill Data, Cell References, and Standard Deviation                      HHMI Activity: Column Graphs, Error Bars, and Standard Error of the Mean                      HHMI Activity: t-Test                      HHMI Activity: Histogram</p>			
<p>12. Instructional resources should include a list of consumable and non-consumable equipment and materials required for each lesson and address safety issues included in the <i>Science Safety Handbook for California Public Schools</i> (CDE 2014).</p>	<p>Each Quick Lab and Chapter Lab teacher note has a materials list and safety notes where appropriate.</p> <p><b>TE:</b>                      Front Matter, pp. TE59-TE60, Quick Lab Materials List</p>			
<p>13. Terms from the CA NGSS and <i>CA Science Framework</i> are used appropriately and accurately in the instructions.</p>	<p>All terms from the CA NGSS and CA Science Framework are used appropriately and accurately in the instructions.</p>			

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<p>14. Electronic learning resources, including technology-based assessments, support instruction that is connected explicitly to the CA NGSS, have a well-designed user interface, provide technical support, and include suggestions for appropriate and differentiated use.</p>	<p>All electronic learning resources have a well-designed user interface that is created by a dedicated team of instructional designers and user experience designers to best fit the needs of twenty-first century students.</p> <p>In the Navigating Your Course folder, there are instructions on how to use Realize as well as instructions on how to use the Realize Reader. Technical support is also available through training modules on MyPearsonTraining.com and the help section of Realize.</p> <p>Suggestions for appropriate and differentiated use of resources are included in the Teacher eText on Realize.</p>			

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15. The teacher resources provide background information about important events, diverse people, places, ideas, and scientific principles appearing in, but not limited to the CA NGSS and <i>CA Science Framework</i> .	<p><u>Events</u> <b>TE:</b> Chapter 3, p. 90, Professional Development Chapter 5, p. 148, Professional Development Chapter 17, p. 574, Professional Development</p> <p><u>Diverse People</u> <b>TE:</b> Chapter 3, p. 106, Professional Development Chapter 8, p. 263, Professional Development Chapter 17, p. 562, Professional Development</p> <p><u>Places</u> <b>TE:</b> Chapter 3, p. 100, Connect to Earth Science Chapter 5, p. 157, Professional Development Chapter 7, p. 219, Professional Development</p>			

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<p>Continued</p> <p>The teacher resources provide background information about important events, diverse people, places, ideas, and scientific principles appearing in, but not limited to the CA NGSS and <i>CA Science Framework</i>.</p>	<p><u>Ideas</u></p> <p><b>TE:</b> Chapter 3, p. 80, Professional Development Chapter 6, p. 184, Professional Development Chapter 6, p. 185, Professional Development</p> <p><u>Scientific Principles</u></p> <p><b>TE:</b> Chapter 2, p. 43, Professional Development Chapter 3, p. 99, Professional Development Chapter 7, p. 224, Professional Development</p>			

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<p>16. Teacher resources discuss and identify preconceptions typical at a grade span (such as inaccurate explanations based on everyday experiences or vernacular conflicts between the everyday use of a term and the meaning of the term in a scientific context) and provide guidance to help students build more accurate understandings of the scientific concept or process.</p>	<p>The Teacher’s Edition contains features titled <i>Address Preconceptions</i> that can be found in the side wrap. The goal of these activities is to determine if students have preconceptions about the content, and if so, lead them to the correct knowledge.</p> <p><b>TE:</b> Chapter 3, p. 86 Chapter 15, p. 487, Chapter 16, p. 530 Chapter 18, p. 594 Chapter 22, p. 745</p> <p>Additional resources that provide resources for addressing preconceptions are woven into other features in the TE.</p> <p><b>TE:</b> Chapter 3, p. 85, Activate Prior Knowledge Chapter 8, p. 261, Differentiated Instruction, Support Advanced Students Chapter 8, p. 265, Professional Development, Biology Outside the Classroom</p>			



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<p>17. Suggested homework, if included, extends and reinforces classroom instruction. Homework should also provide opportunities to support student learning through shared experiences with family. Opportunities may include projects, journaling, reflection, or interviews with parents around a concept or activity such as family history used in genetics, decomposition in gardening, or chemistry in cooking.</p>	<p>The Lesson Plan Overview boxes often suggest homework assignments that include activities as well as readings and other assignments.</p> <p><b>TE:</b> Lesson 5.3, p. 160, Lesson Plan Overview Lesson 7.1, p. 210, Lesson plan Overview Lesson 16.2, p. 521, Lesson Plan Overview Chapter 23 Case Study, p. 782, Introduce the Case</p>			
<p>18. The program should include resources that teachers can use to inform families about the CA NGSS and student progress.</p>	<p><u>Realize</u> Program Resources folder: Course Letter</p>			

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<p>19. Resources provide teachers with instructions on how outside resources (e.g., guest speakers; museum visits; electronic field trips, informal science education providers including state parks, nature parks, science centers, local organizations, school gardens or schoolyard open spaces, local parks, etc.) can be incorporated into a three-dimensional learning, standards-based science program.</p>	<p><u>Professional Development, Biology Outside the Classroom</u> These features encourage teachers to bring the study of biology to the field. This may be museums, local wildlife preserves, or universities to learn more about the study of biology.</p> <p><b>TE:</b> Unit 1, p. 2 Unit 2, p. 72 Unit 3, p. 248 Unit 4, p. 384 Unit 5, p. 550 Unit 6, p. 698</p> <p><u>Extend the Case</u> Extend the Case features are found in the Case Study Wrap-Up and give suggestions on how to apply the Case Study to student's everyday life.</p> <p><b>TE:</b> Chapter 1, p. 31 Chapter 13, p. 441 Chapter 17, p. 581 Chapter 27, p. 967</p>			

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<p>Continued</p> <p>Resources provide teachers with instructions on how outside resources (e.g., guest speakers; museum visits; electronic field trips, informal science education providers including state parks, nature parks, science centers, local organizations, school gardens or schoolyard open spaces, local parks, etc.) can be incorporated into a three-dimensional learning, standards-based science program.</p>	<p><u>Professional Development, Science Outreach</u></p> <p>These features have students contact scientists or museums to further extend their knowledge of the content.</p> <p><b>TE:</b> Unit 1, p. 5, Unit 2, p. 75 Unit 4, p. 387 Chapter 3, p. 103, Scientist Outreach Chapter 7, p. 236, Professional Development Chapter 14, p. 475, Scientist Outreach</p> <p>The SE and TE contain trips for successful field trips to support teachers while they are outside the classroom.</p> <p><b>SE/TE:</b> Tips for Successful Field Trips, pp. A-34--A-35</p>			

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<p>Continued</p> <p>Resources provide teachers with instructions on how outside resources (e.g., guest speakers; museum visits; electronic field trips, informal science education providers including state parks, nature parks, science centers, local organizations, school gardens or schoolyard open spaces, local parks, etc.) can be incorporated into a three-dimensional learning, standards-based science program.</p>	<p><u>Chapter Labs</u> Some chapter labs involve students utilizing materials from the natural world or traveling out into the world for research purposes.</p> <p><b>Digital:</b> Chapter 6, Biodiversity on the Forest Floor Chapter 22, Exploring Plant Communities Chapter 23, How do Plant Adaptations Compare? Chapter 27, Testing for Lead</p>			
<p>20. Using guidance from the Model School Library Standards for California Public Schools, resources provide information for teachers on the effective use of library and media resources that best complement the standards.</p>	<p><b>Realize</b> Program Resources folder: Effective Use of Library and Media Resources</p>			

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21. The teacher resources provide guidance and support for engaging students in collaborative conversations using grade level appropriate academic vocabulary for scientific discourse.	<p><u>Act as a Facilitator:</u>  <b>TE:</b>                      Unit 1, California Spotlight, Problem Wrap-up, p. 5, Problem Wrap-Up                      Unit 2, California Spotlight, p. 74A, Problem Launch                      Chapter 4, p. 135, Act as a Facilitator                      Chapter 21, p. 716, Act as a Facilitator</p> <p><u>Lead a Discussion:</u>  <b>TE:</b>                      Unit 2, California Spotlight, p. 74B, Interactivity                      Chapter 4, p. 134, Lead a Discussion                      Unit 3, California Spotlight, p. 250A, Video                      Chapter 14, p. 458, Lead a Discussion                      Chapter 23, pp. 786, Lead a Discussion</p>			

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<p>Continued</p> <p>The teacher resources provide guidance and support for engaging students in collaborative conversations using grade level appropriate academic vocabulary for scientific discourse.</p>	<p><u>Collaborative Conversations</u> <b>TE:</b> Chapter 2, p. 66, Develop Classroom Collaboration Chapter 11, p. 378, Develop Classroom Collaboration Chapter 14, p. 478, Develop Classroom Collaboration Chapter 17, p. 584, Develop Classroom Collaboration Chapter 20, p. 692, Develop Classroom Collaboration</p>			