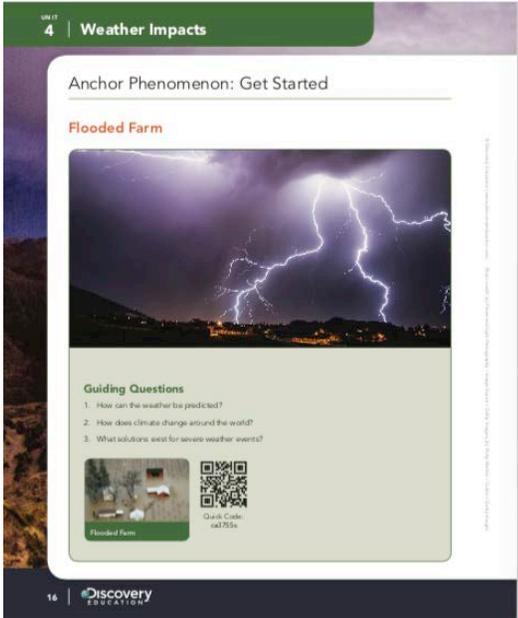
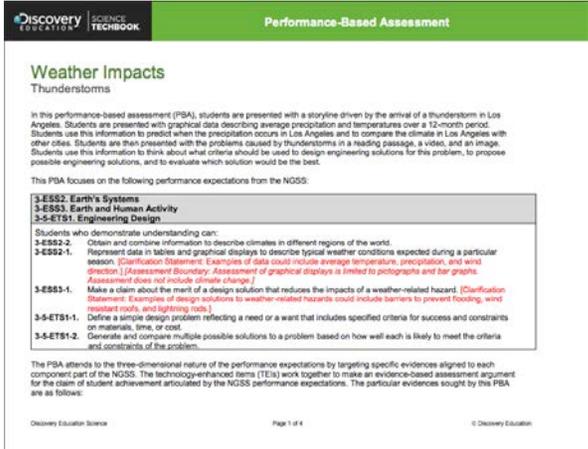


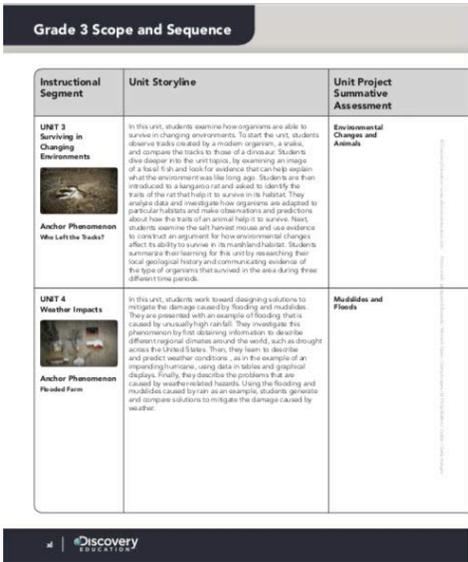
Designed for CA NGSS: Foundations

Component	Strengths	Citations				
<p>F1. Presence of Phenomena / Problems.</p>	<p>The materials include phenomena/problems:</p> <ul style="list-style-type: none"> • that have the potential to drive student learning. • have the potential to relate across the dimensions. <p>Unit Pages: The Unit Page provides teachers and students direct access to Anchor Phenomena for the unit, as well as Investigative Phenomena for each concept found within the unit. The Unit pages are available both in print and digital, and include additional support for teachers, in the Teacher Guide, on how to launch the anchor phenomenon with students. The anchor phenomenon provides students with real-world instances of phenomena, which serve as the context for the unit project. Students communicate their initial ideas related to the unit project, before engaging with the investigative phenomena in each concept. Investigative phenomena are carefully selected to elicit student scientific questions. As students move through the learning progression, students apply three-dimensional thinking to communicate their ideas about both the anchor phenomenon and each investigative phenomenon, with the intent of constructing explanations to their own questions.</p>	<p>Grade 3: Unit 4: Weather Impacts Unit Page: Anchor Phenomenon Print:</p> <table border="1" data-bbox="1402 459 1927 630"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Anchor Phenomenon Launch p. 16</td> <td>Anchor Phenomenon: p. 2-3</td> </tr> </tbody> </table> <p>Digital: Enter Quick Code: ca3755s</p> 	TE Pages	SE Pages	Anchor Phenomenon Launch p. 16	Anchor Phenomenon: p. 2-3
TE Pages	SE Pages					
Anchor Phenomenon Launch p. 16	Anchor Phenomenon: p. 2-3					

Component	Strengths	Citations				
<p>F1. Presence of Phenomena / Problems.</p>	<p>Examples Grade 3 Unit 4 Unit Level Alignment: In this unit, students work toward designing solutions to mitigate the damage that flooding and mudslides cause. They are presented with an example of flooding that is caused by unusually high rainfall. They investigate this phenomenon by first obtaining information to describe different regional climates around the world, such as drought across the United States. Then, they learn to describe and predict weather conditions, such as an impending hurricane, using data in tables and graphical displays. Finally, they describe the problems that weather-related hazards cause. Using the flooding and mudslides that rain causes as an example, students generate and compare solutions to mitigate the damage weather causes.</p> <p>Investigative Phenomenon Examples: 3rd Grade: Unit 4 Concept 1: Regional Climates: Student learn about different climates around the world to predict weather patterns. Concept 2: Predicting Weather: Students view weather data to look for patterns and make predictions about future events.</p>	<p>Investigative Phenomenon Grade 3, Unit 4, Concept 4.1 Print:</p> <table border="1" data-bbox="1354 386 1869 495"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 2 p. 30-31</td> <td>Activity 2 p. 10-11</td> </tr> </tbody> </table> <p>Digital: Enter Quick Code: ca3760s</p> 	TE Pages	SE Pages	Activity 2 p. 30-31	Activity 2 p. 10-11
TE Pages	SE Pages					
Activity 2 p. 30-31	Activity 2 p. 10-11					

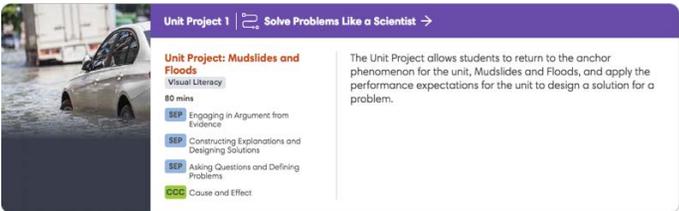
Component	Strengths	Citations
<p>F1. Presence of Phenomena / Problems.</p>	<p>Performance-Based Unit Assessment: Grade 3: Unit 4: After students have completed the activities within each concept of the unit, teachers can assign students the Performance-Based Assessment (PBA) for that unit. The accompanying Teacher’s Guide outlines the NGSS performance expectations that are the focus of the PBA.</p> <p>In this PBA, students are presented with a storyline driven by the arrival of a thunderstorm in Los Angeles. Students are presented with graphical data describing average precipitation and temperatures over a 12-month period. Students use this information to predict when the precipitation occurs in Los Angeles and to compare the climate in Los Angeles with other cities. Students are then presented with the problems caused by thunderstorms in a reading passage, a video, and an image. Students use this information to think about what criteria should be used to design engineering solutions for this problem, to propose possible engineering solutions, and to evaluate which solution would be the best.</p>	<p>Performance-Based Unit Assessment Grade 3, Unit 4 Digital: Enter Quick Code: ca3821s</p> <p>Print:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>TE Pages Performance-Based Assessment p. 208</p> </div> <p>Teacher’s Guide: https://tinyurl.com/y82mld3o</p> 

Component	Strengths	Citations				
<p>F1. Presence of Phenomena / Problems.</p>	<p>Concept 3: Weather Hazards: Student learn about the causes and outcomes of severe weather events and engineer potential design solutions.</p> <p>Phenomenon-Based Unit Project: Grade 5: Unit 1: Students apply the SEPs and CCCs developed through the Unit to engage in a three-dimensional Performance-Based Project. They use their knowledge of extreme weather events, particularly floods and mudslides, to design a solution that creates barriers from these events. Students collaborate in groups while creating their designs.</p>	<p>Phenomenon-Based Unit Project Grade 3, Unit 4 Print:</p> <table border="1" data-bbox="1354 354 1866 526"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Unit Project: Mudslides and Floods p. 204-207</td> <td>Unit Project: Mudslides and Floods p. 156-161</td> </tr> </tbody> </table> <p>Digital: Enter Quick Code: ca3820s</p> 	TE Pages	SE Pages	Unit Project: Mudslides and Floods p. 204-207	Unit Project: Mudslides and Floods p. 156-161
TE Pages	SE Pages					
Unit Project: Mudslides and Floods p. 204-207	Unit Project: Mudslides and Floods p. 156-161					

Component	Strengths	Citations
<p>F2. Presence of Three Dimensions.</p>	<p>The materials include the three dimensions, such that:</p> <ul style="list-style-type: none"> the DCIs, SEPs, and CCCs are present and have the potential to support student learning. when engineering design is a learning focus, it is integrated with the appropriate dimensions (i.e., engineering is not isolated). <p>Each concept has a multitude of resources and materials to support learning of the DCIs, SEPs and CCCs. Specific examples of California Science Techbook assets include, but are not limited to:</p> <p>Course Level Alignment: The course level development of the Performance Expectations, including the DCIs, SEPs, and CCCs can be found in the Next Generation Science Standards and Three Dimensions at a Glance pages within the Scope & Sequence area of the print Teacher’s Edition.</p>	<p>Course Level Alignments: https://tinyurl.com/y9xt9nqt</p> <p>Grade 3: Course Unit 4 Print:</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>TE Pages Scope & Sequence overview p. xxxviii-xli</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Three Dimensions p. 4-5</p> </div> <div style="text-align: center; margin-top: 20px;">  </div>

Instructional Segment	Unit Storyline	Unit Project Summative Assessment
<p>UNIT 3 Surviving in Changing Environments</p>  <p>Anchor Phenomenon We Left the Tracks?</p>	<p>In this unit, students examine how organisms are able to survive in changing environments. To start the unit, students observe tracks created by a modern organism, a snake, and compare the tracks to those of a dinosaur. Students dive deeper into the unit topics by examining a mummified fossil fish and look for evidence that can help explain what the environment was like long ago. Students are then introduced to a kangaroo rat and asked to identify the traits of the rat that help it to survive in its habitat. They analyze data and investigate how organisms are adapted to particular habitats and make observations and predictions about how the traits of an animal help it to survive. Next, students examine the earth's fossil record and use evidence to construct an argument for how environmental changes affect its ability to survive in its natural habitat. Students summarize their learning for the unit by researching their local geological history and communicating evidence of the type of organisms that thrived in the area during three different time periods.</p>	<p>Environmental Changes and Animals</p>
<p>UNIT 4 Weather Impacts</p>  <p>Anchor Phenomenon Flooded Farm</p>	<p>In this unit, students work toward designing solutions to mitigate the damage caused by flooding and mudslides. They are presented with an example of flooding that is caused by unusually high rainfall. They investigate the phenomenon by first gathering information to describe different regional climates around the world, such as drought and predict weather conditions, as in the example of an impending hurricane, using data in tables and graphical displays. Finally, they describe the problems that are caused by weather-related hazards. Using the flooding and mudslides caused by an example, students generate and propose solutions to mitigate the damage caused by weather.</p>	<p>Mudslides and Floods</p>

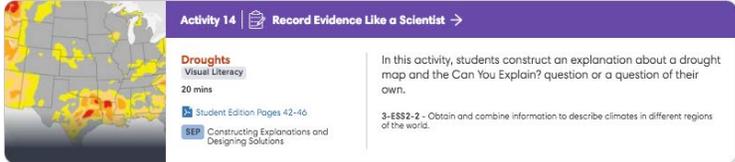
Component	Strengths	Citations
<p>F2. Presence of Three Dimensions.</p>	<p>Unit Level Alignment: Unit level three dimensional expectations include the Unit project, tied to the Unit Anchor Phenomenon, as well as the Summative Performance Based Assessment (PBA).</p> <p>In the unit project, students will demonstrate the SEPs and CCCs to apply their newly acquired DCIs for the unit to both science and engineering-based problems and scenarios.</p> <p>The three-dimensional PBA expects students to apply the ideas of the unit to a new storyline in order to demonstrate transfer of learning. A Teacher’s Guide for the PBA outlines the evidence students demonstrate across the three dimensions.</p> <p>Example: Grade 3: Unit 4, Weather Impacts: Students are introduced to the Anchor Phenomenon with an image of a flooded farm. Through the three investigative phenomena in the unit, students explore different climates around the world and climate patterns. They look at weather data and look for patterns to make predictions about future weather conditions. Student also explore the different causes and outcomes of severe weather events, and how engineers design solutions to prevent weather outcome hazards.</p>	<p>The diagram is a vertical flowchart titled 'Unit Outline' for 'Unit 4: Weather Impacts'. It starts with 'Anchor Phenomenon: Get Started' featuring 'Flooded Farm'. This leads to 'Unit Project Preview' with 'Mudslides and Floods'. The 'Concepts' section includes '4.1 Regional Climates', '4.2 Predicting Weather', and '4.3 Weather Hazards'. This is followed by 'Unit Project' with 'Mudslides and Floods', and finally 'Unit Performance-Based Assessment' with 'Thunderstorms'. Arrows indicate the downward flow between these sections.</p>

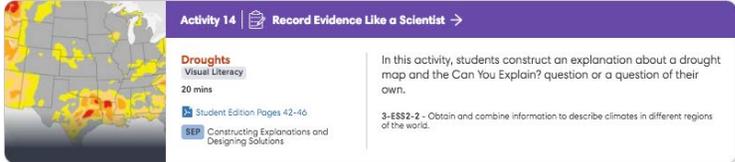
Component	Strengths	Citations				
<p>F2. Presence of Three Dimensions.</p>	<p>Science and Engineering Practices and Cross Cutting Concepts are integrated as students work on the Unit Project: Mudslides and Floods.</p>  <p>Concept Level Alignment:</p> <ul style="list-style-type: none"> • Three-dimensional learning objectives drive the design and sequence of the activities within each concept • Teacher support for the alignment to the SEP and CCCs is included at the activity level: <ul style="list-style-type: none"> ○ Bolded text highlights the specific dimension of the PE addressed during each activity ○ Instructional Focus provides details on the element level of the SEP and CCC students will demonstrate at the completion of the activity ○ NGSS call-outs highlight for both teachers and students the specific SEP 	<p>SEPs and CCCs Grade 3, Unit 4 Digital: Enter Quick Code: ca3820s Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1354 488 1866 662"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Unit Project: Mudslides and Floods p. 204-207</td> <td>Unit Project: Mudslides and Floods p. 156-161</td> </tr> </tbody> </table> <p>Grade 3, Unit 4 Digital: Enter Quick Code: ca3755s</p> <p>Concept Pages: Within each concept, reference tagged activities in Learn and Share (Explore, Explain, and Elaborate) for additional evidence of three dimensions.</p> <p>Digital: Enter Quick Code:</p> <ul style="list-style-type: none"> • Concept 4.1: ca3758s • Concept 4.2: ca3776s • Concept 4.3: ca3796s 	TE Pages	SE Pages	Unit Project: Mudslides and Floods p. 204-207	Unit Project: Mudslides and Floods p. 156-161
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Component	Strengths	Citations										
<p>F2. Presence of Three Dimensions.</p>	<ul style="list-style-type: none"> ○ and CCC being addressed within the activity ○ Strategies to set up the learning environment for students to demonstrate the SEPs and CCCs related to the concept DCIs ○ Teacher notes for each digital activity provide the dimensions addressed along with instructional focus, strategies, misconceptions and other support at point of use. ○ Pathways for Learning guidance provides options for students to meet the element level of the SEP and CCC in a variety of technology settings ○ Teacher reflection questions encourage reflection on students' performance across the three dimensions. 	<p>Print:</p> <table border="1" data-bbox="1257 321 1864 459"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Concept 4.1: p 20</td> <td>Concept 4.1: p 6</td> </tr> <tr> <td>Concept 4.2: p 74</td> <td>Concept 4.2: p 52</td> </tr> <tr> <td>Concept 4.3: p 140</td> <td>Concept 4.3: p 104</td> </tr> </tbody> </table> <table border="1" data-bbox="1335 493 1871 816"> <tbody> <tr> <td style="vertical-align: top;"> <p>Concept 1: Regional Climates 3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.</p> <p>Concept 2: Predicting Weather 3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p>Concept 3: Weather Hazards 3-ESS3-1 Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.</p> <p>3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <p>3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <p>3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p> </td> <td style="vertical-align: top;"> <p>Grade 5 K.ESS2.D; K.ESS3.B; K.ETS1.A; K.2.ETS1.C</p> <p>Grade 4 4.ESS2.A; 4.ESS3.B; 4.ETS1.A</p> <p>Grade 5 5.ESS2.A</p> <p>Middle School MS.ESS2.C; MS.ESS2.D; MS.ESS3.B; MS.ETS1.A; MS.ETS1.B; MS.ETS1.A</p> </td> </tr> </tbody> </table> <p>Teacher Notes: Unit 4, Concept 4.1, Activity 6 https://tinyurl.com/y8lx94jx Note: Make sure <i>Teacher View On</i></p> <div data-bbox="1373 954 1839 1284" style="border: 1px solid #ccc; padding: 10px;"> <p>Teacher Note</p> <p>Instructional Focus In this activity, students use evidence from text and media to construct an argument explaining regional climate patterns.</p> <p>Engaging in Argument from Evidence</p> <p>Strategy Use the interactive Exploring Regional Climates to have students explore different climates around the world. Students should make predictions about what type of climates are located in various parts of the world.</p> <ul style="list-style-type: none"> • Before allowing students to test their predictions, read the introduction screen together as a class. • Help students identify evidence to support their predictions by highlighting all of the factors described in the introduction text. • Have student volunteers make a list of the climate factors on a large sheet of paper. • Students should be allowed to observe the map and return to their predictions to make any changes based on the climate factors. • Encourage students to turn and talk with a classmate to ensure everyone has a chance to explain their prediction. <p><small>You can have students check their predictions as a whole-group activity, asking students to vote for each answer choice and dragging the associated images, or students can check their own predictions by cycling through the interactive as other students read the text. How Are Climates Different around the World? for Day 5.</small></p> </div>	TE Pages	SE Pages	Concept 4.1: p 20	Concept 4.1: p 6	Concept 4.2: p 74	Concept 4.2: p 52	Concept 4.3: p 140	Concept 4.3: p 104	<p>Concept 1: Regional Climates 3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.</p> <p>Concept 2: Predicting Weather 3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p>Concept 3: Weather Hazards 3-ESS3-1 Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.</p> <p>3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</p> <p>3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p> <p>3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>	<p>Grade 5 K.ESS2.D; K.ESS3.B; K.ETS1.A; K.2.ETS1.C</p> <p>Grade 4 4.ESS2.A; 4.ESS3.B; 4.ETS1.A</p> <p>Grade 5 5.ESS2.A</p> <p>Middle School MS.ESS2.C; MS.ESS2.D; MS.ESS3.B; MS.ETS1.A; MS.ETS1.B; MS.ETS1.A</p>
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<p>F2. Presence of Three Dimensions.</p>		<p>Pathways for Learning Grade 3, Unit 4, Concept 4.1 Print:</p> <table border="1" data-bbox="1297 354 1640 459"> <tr> <td>TE Page</td> </tr> <tr> <td>Pathways for Learning p. 56</td> </tr> </table> <div data-bbox="1394 492 1812 930" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>Pathways to Learning</p> <table border="1"> <tr> <td style="background-color: #e6f2ff;">Print</td> <td>Using the Spotlight on Strategies: Tweet, Tweet, have each student create a tweet of their forecast. Hang the tweets on a global map for students to see how the forecast changes around the world.</td> </tr> <tr> <td>Blended</td> <td>In small groups, have students create a Studio Board of a "Global Forecast." Students will work together to create their forecast for the desert and costal area. Then, individuals will create the forecast for their unique climate.</td> </tr> <tr> <td>Digital</td> <td>Have each student create a Studio Board that shows the forecast for all three of their climates.</td> </tr> </table> </div> <p>Teacher Reflection questions Grade 3, Unit 4, Concept 4.1 Print:</p> <table border="1" data-bbox="1297 1097 1640 1203"> <tr> <td>TE Page</td> </tr> <tr> <td>Reflection questions p. 38</td> </tr> </table> <div data-bbox="1444 1235 1766 1406" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0; background-color: #008080; color: white;"> <p>Teacher Reflection</p> <p>Based on my data:</p> <ul style="list-style-type: none"> • What content do my students already know? • What misconceptions do my students have? • Are any of my students ready for extension at this point in the lesson? </div>	TE Page	Pathways for Learning p. 56	Print	Using the Spotlight on Strategies: Tweet, Tweet, have each student create a tweet of their forecast. Hang the tweets on a global map for students to see how the forecast changes around the world.	Blended	In small groups, have students create a Studio Board of a "Global Forecast." Students will work together to create their forecast for the desert and costal area. Then, individuals will create the forecast for their unique climate.	Digital	Have each student create a Studio Board that shows the forecast for all three of their climates.	TE Page	Reflection questions p. 38
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<p>F2. Presence of Three Dimensions.</p>	<p>Formative Assessment Items: Teachers have the opportunity to gather formative assessment data related to students’ progress of the three dimensions at various points within each concept.</p> <ul style="list-style-type: none"> Technology Enhanced Items (TEIs) have been embedded throughout each concept to uncover what students know and allow students to demonstrate three-dimensional proficiency of the performance expectations. Student responses feed directly to the teacher dashboard, providing instant access to data to inform instruction and drive differentiation strategies. Each TEI has built-in scaffolded feedback for students. Summative Concept Assessments, focused on the DCIs, are found at the end of each concept. These assessments can be assigned to students, taken by students on their own as a practice test, or printed and given to students to complete as an assessment or an assignment. The results of these assessments are provided within the teacher dashboard. Teachers are able to identify areas of strength and weakness and adjust pacing of instruction to achieve proficiency for all students. 	<p>Formative Assessment Grade 3, Unit 4, Concept 4.1 Digital: Enter Quick Code: ca3766s</p> <p>Print:</p> <table border="1" data-bbox="1297 488 1955 662"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 8, Understanding Climate Zones p. 47-49</td> <td>Activity 8, Understanding Climate Zones p. 24-26</td> </tr> </tbody> </table> <p>Summative Concept Assessment Grade 3, Unit 4, Concept 4.1 Digital: Enter Quick Code: ca3774s</p> <p>Print:</p> <table border="1" data-bbox="1260 889 1864 1027"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 16, Review: Regional Climates p. 84-85</td> <td>Activity 16, Review: Regional Climates p. 50-51</td> </tr> </tbody> </table> <p>Digital: Summative Concept Assessment https://tinyurl.com/ydxsrab4 Note: Make sure <i>Teacher View On</i></p> 	TE Pages	SE Pages	Activity 8, Understanding Climate Zones p. 47-49	Activity 8, Understanding Climate Zones p. 24-26	TE Pages	SE Pages	Activity 16, Review: Regional Climates p. 84-85	Activity 16, Review: Regional Climates p. 50-51
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<p>F2. Presence of Three Dimensions.</p>	<ul style="list-style-type: none"> Record Evidence activity expects students to analyze complex text and authentic data and evaluate information to support a student-generated claim to their own questions or the Can You Explain question for the concept. As students refine their scientific explanations throughout a course, they will refine their understanding of science content as well as their understanding of the nature of science. Students and teachers can review and provide feedback to one another to increase the rigor of the response throughout a concept, unit, or course. These activities have been scaffolded across a course to support students in achieving proficiency for the grade-band expectation. Hands-On Activities (HOAs) provide opportunities for students to demonstrate the science and engineering practices and analyze data to look for evidence of cross cutting concepts. Hands-On Activities contain student sheets that allow students to observe, predict, classify, communicate, and analyze materials and practices from science investigations. 	<p>Record Evidence activity Grade 3, Unit 4, Concept 4.1 Digital: Enter Quick Code: ca3777s</p> <p>Print:</p> <table border="1" data-bbox="1260 456 1864 561"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 14, Droughts p. 64-68</td> <td>Activity 14, Droughts p. 42-46</td> </tr> </tbody> </table>  <p>Hands-On Investigation Grade 3, Unit 4, Concept 4.2 Digital: Enter Quick Code: ca3783s</p> <p>Print:</p> <table border="1" data-bbox="1260 992 1864 1198"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 6, Hands-On investigation: Collecting Weather Data p. 97-105</td> <td>Activity 6, Hands-On investigation: Collecting Weather Data p. 65-71</td> </tr> </tbody> </table> <p>Digital teacher notes and activity video with Teacher View On feature.</p>	TE Pages	SE Pages	Activity 14, Droughts p. 64-68	Activity 14, Droughts p. 42-46	TE Pages	SE Pages	Activity 6, Hands-On investigation: Collecting Weather Data p. 97-105	Activity 6, Hands-On investigation: Collecting Weather Data p. 65-71
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Activity 6, Hands-On investigation: Collecting Weather Data p. 97-105	Activity 6, Hands-On investigation: Collecting Weather Data p. 65-71									



Component	Strengths	Citations
<p>F2. Presence of Three Dimensions.</p>		<div data-bbox="1346 321 1850 906"> <p>Day 4 30 min</p> <h3>How Do People Use Common Tools to Measure Weather Conditions?</h3> <p>Day 4: Instructional Focus Students focus on creating a hypothesis about the weather and developing a method to evaluate whether the hypothesis is supported.</p> <p>Activity 6 Investigate Like a Scientist 20 min</p> <p>Hands-On Investigation: Collecting Weather Data</p> <p>NGSS Alignment 3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p>Concept 4.2: Predicting Weather 97</p> </div> <p>Digital teacher notes and activity video with Teacher View On feature.</p> <div data-bbox="1436 1008 1751 1409"> <p>Teacher Note</p> <p>Materials (per group)</p> <ul style="list-style-type: none"> • Wind sock* • Rain gauge (newer clear glass jar, lined with a mesh roughly the same size or slightly larger than the mouth of the jar, and plastic ruler; thick elastic band)* • Celsius thermometer (if possible, one that includes Fahrenheit as well) • Camera* • Compass* • Clock • Chart to record daily weather forecasts (high, temperature, precipitation, cloud cover, and wind speed) <p>*Included in materials list © Consumable material</p> <p>Hands-On Investigation</p> <p>Teacher Note</p> <p>Materials (per group)</p> <ul style="list-style-type: none"> • Wind sock* • Rain gauge* • Thermometer (newer) • Camera* • Compass* • Clock <p>*Included in materials list © Consumable material</p> <p>Teacher Hands-On Activity Video: Collecting Weather Data</p> <p>Instructional Focus In this activity, students will collect weather data, including air temperature, wind direction, and precipitation, over a period of at least 2 weeks.</p> <p>Asking Questions and Defining Problems</p> <p>Activity Addresses Make a Prediction To introduce the activity, discuss the concept of weather. Ask: Describe the weather today. How many different kinds of observations can you make about today's weather? How can you tell what tomorrow's weather is going to be? For accuracy, students may want to use the sun or clouds, wind speed, wind direction, temperature, and other weather conditions to help predict the weather.</p> <p>Ask students how they will work in groups to set up weather stations in different areas around the school grounds.</p> <p>Ask</p> <ul style="list-style-type: none"> • Do you think the weather conditions will be exactly the same at each location? If not, what might affect the temperature, precipitation, or wind at different locations? Students may suggest that being closer to a building might block the wind or change its direction. It might also decrease </div>

Component	Strengths	Citations																	
<p>F3. Presence of Environmental Principles & Concepts (EP&Cs).</p>	<p>The materials include (as applicable):</p> <ul style="list-style-type: none"> • instructional content that incorporates the California EP&Cs. • opportunities for students to examine the interactions and interdependence of human societies and natural systems. • opportunities for students to develop and implement solutions to real-world environmental problems. <p>The Discovery Education Comprehensive Science Program includes varied resources that identify, include, and authentically align the instructional content to the California EP&Cs. EP&C Map demonstrates specific resources and activities within each course that target the California EP&Cs.</p> <p>Concept Level Content: Grade 3, Unit 3, Concept 3.3: Environmental Changes In this concept, students explore the Wonder question, “How does the environmental change over time?” Throughout the Learn section, students investigate questions about environmental changes. They construct explanations related to the Wonder question by explaining environmental changes over time.</p>	<p>EP&Cs - Grade 3: Course level Unit 4 Print:</p> <table border="1" data-bbox="1297 418 1640 560"> <tr> <td>TE Pages</td> </tr> <tr> <td>Scope & Sequence overview</td> </tr> <tr> <td>p. xxxviii-xli</td> </tr> </table> <p>Digital: EP&Cs Map https://tinyurl.com/y9xt9nqt</p> <p>Appropriate Alignments among Environmental Principles and Concepts (EP&Cs) and CA NGSS: Grade Three</p> <table border="1" data-bbox="1297 669 1906 1058"> <thead> <tr> <th>Performance Expectations</th> <th>Connections Between EP&Cs, GCs, and SEP6</th> <th>Clarifications and Connections Between DCs and EP&Cs</th> <th>Discovery Education Science Techbook Resources</th> </tr> </thead> <tbody> <tr> <td>3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. [Clarification: Statement: Changes organisms go through during their life term a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.]</td> <td> <p>Crosscutting Concepts</p> <p>Patterns</p> <ul style="list-style-type: none"> •Patterns of change can be used to make predictions. (3-LS-1) <p>Science and Engineering Practices</p> <p>Developing and Using Models</p> <ul style="list-style-type: none"> •Develop models to describe phenomena. (3-LS-1) <p>Connections to Nature of Science</p> <p>Scientific Knowledge is Based on Empirical Evidence</p> <ul style="list-style-type: none"> •Science findings are based on recognizing patterns. (3-LS-1) </td> <td> <p>As students learn that: LS1.B: Growth and Development of Organisms “Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycle. 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(Activities 7-11)</p> <p>Grade 3 > Surviving in Changing Environments > Interactions in the Environment > Share > STEM in Action, Careers and Habitat Characteristics</p> <p>Grade 3 > Surviving in Changing Environments > Environmental Changes > Learn > How Can Environments Change? (Activities 9-9)</p> </td> </tr> </tbody> </table> <p>EP&Cs – Concept level Grade 3, Unit 3, Concept 3.3 Digital: Enter Quick Code: ca3586s</p> <p>Print:</p> <table border="1" data-bbox="1260 1286 1864 1388"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Learn tab</td> <td>Learn tab</td> </tr> <tr> <td>p. 201-241</td> <td>p. 148-185</td> </tr> </table>	TE Pages	Scope & Sequence overview	p. xxxviii-xli	Performance Expectations	Connections Between EP&Cs, GCs, and SEP6	Clarifications and Connections Between DCs and EP&Cs	Discovery Education Science Techbook Resources	3-LS1-1. 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<p>F4. Presence of a Logical Sequence of Learning.</p>	<p>Materials demonstrate appropriate sequencing of three dimensions when:</p> <ul style="list-style-type: none"> • they include a targeted set of DCIs, SEPs, and CCCs within a sequence; the sequence is clear and logical across the DCIs; and the SEPs and CCCs are potentially sufficient and appropriate for students to figure out the phenomena or problems. • phenomenon or problems are linked to each other. <p>The three dimensions (SEP, DCI, CCC) are sequenced across each course and designed with scaffolds across the grade bands.</p> <p>Unit Level Alignment: Each unit in Grades K-5 aligns to the standard bundles found in the California Framework for Science. Example of building SEPs across the course: 3rd Grade: Unit 4 – Weather Impacts</p> <p><u>Concept 4.1</u> Regional Climates</p> <ul style="list-style-type: none"> • SEP Constructing Explanations and Designing Solutions • SEP Engaging in Argument from Evidence • SEP Obtaining, Evaluating, and Communicating Information <p><u>Concept 4.2</u> Predicting Weather</p> <ul style="list-style-type: none"> • SEP Constructing Explanations and Designing 	<p>Grade 3: Course Course Level Alignments: https://tinyurl.com/y9xt9nqt</p> <p>Scope and Sequence and Three Dimensions Grade 3, Unit 4 Print:</p> <table border="1" data-bbox="1297 524 1640 761"> <tr> <td>TE Pages</td> </tr> <tr> <td>Scope & Sequence overview p. xxxviii-xli</td> </tr> <tr> <td>Three Dimensions p. 4-5</td> </tr> </table>	TE Pages	Scope & Sequence overview p. xxxviii-xli	Three Dimensions p. 4-5
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<p>F4. Presence of a Logical Sequence of Learning.</p>	<ul style="list-style-type: none"> SEP Analyzing and Interpreting Data SEP Obtaining, Evaluating, and Communicating Information <p><u>Concept 4.3 Weather Hazards</u></p> <ul style="list-style-type: none"> SEP Planning and Carrying Out Investigations SEP Constructing Explanations and Designing Solutions SEP Analyzing and Interpreting Data SEP Engaging in Argument from Evidence SEP Obtaining, Evaluating, and Communicating Information 	<p>Grade 3: Course Course Level Alignments: https://tinyurl.com/y9xt9nqt</p> <p>Scope and Sequence and Three Dimensions Grade 3, Unit 4 Print:</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>TE Pages</p> <p>Scope & Sequence overview p. xxxviii-xli</p> <p>Three Dimensions p. 4-5</p> </div> <p>The following chart shows how each concept is aligned with the three-dimensional components of each performance expectation found within the unit.</p> <table border="1"> <thead> <tr> <th>NGSS Dimension</th> <th>Concept 4.1 Regional Climate</th> </tr> </thead> <tbody> <tr> <td>Science and Engineering Practices (SEP)</td> <td></td> </tr> <tr> <td>SEP Planning and Carrying Out Investigations</td> <td></td> </tr> <tr> <td>SEP Constructing Explanations and Designing Solutions</td> <td>•</td> </tr> <tr> <td>SEP Analyzing and Interpreting Data</td> <td></td> </tr> <tr> <td>SEP Engaging in Argument from Evidence</td> <td>•</td> </tr> <tr> <td>SEP Obtaining, Evaluating, and Communicating Information</td> <td>•</td> </tr> <tr> <td>Disciplinary Core Ideas (DCI)</td> <td></td> </tr> <tr> <td>DCI.ESS1.C: The History of Planet Earth</td> <td>•</td> </tr> <tr> <td>DCI.ESS2.A: Earth Materials and Systems</td> <td>•</td> </tr> <tr> <td>DCI.ETS1.A: Defining and Defending Engineering Problems</td> <td>•</td> </tr> <tr> <td>DCI.ETS1.B: Developing Possible Solutions</td> <td></td> </tr> <tr> <td>DCI.ETS1.C: Optimizing the Design Solution</td> <td></td> </tr> <tr> <td>Crosscutting Concepts (CCC)</td> <td></td> </tr> <tr> <td>CCC Cause and Effect</td> <td>•</td> </tr> <tr> <td>CCC Scale, Proportion, and Quantity</td> <td></td> </tr> <tr> <td>CCC Patterns</td> <td>•</td> </tr> </tbody> </table> <p>SEP: Science and Engineering Practices Look for these key elements across the teacher and student activities to integrate learning opportunities outside the core disciplinary ideas.</p> <p>CCC: Crosscutting Concepts</p>	NGSS Dimension	Concept 4.1 Regional Climate	Science and Engineering Practices (SEP)		SEP Planning and Carrying Out Investigations		SEP Constructing Explanations and Designing Solutions	•	SEP Analyzing and Interpreting Data		SEP Engaging in Argument from Evidence	•	SEP Obtaining, Evaluating, and Communicating Information	•	Disciplinary Core Ideas (DCI)		DCI.ESS1.C: The History of Planet Earth	•	DCI.ESS2.A: Earth Materials and Systems	•	DCI.ETS1.A: Defining and Defending Engineering Problems	•	DCI.ETS1.B: Developing Possible Solutions		DCI.ETS1.C: Optimizing the Design Solution		Crosscutting Concepts (CCC)		CCC Cause and Effect	•	CCC Scale, Proportion, and Quantity		CCC Patterns	•
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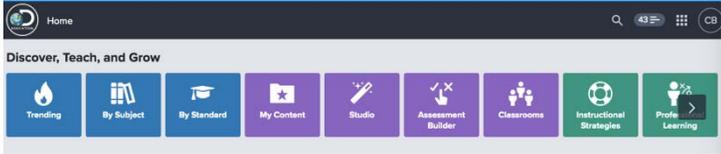
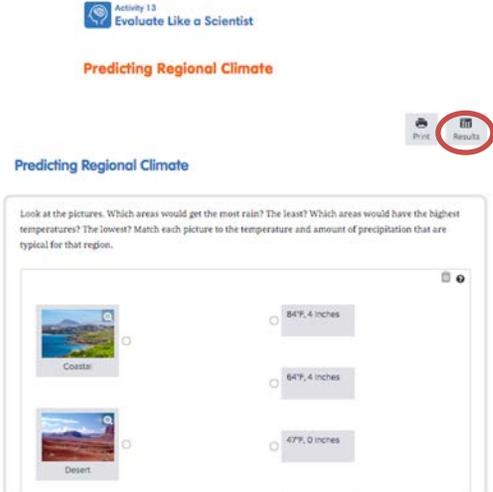
Component	Strengths	Citations								
<p>F4. Presence of a Logical Sequence of Learning.</p>	<p>Concept Level Sequence Examples: Students are introduced to grade appropriate, linked phenomena, that are developmentally scaffolded and in a logical sequence to facilitate engagement in the three dimensions to drive students toward the learning goals.</p> <p>Grade 3, Unit 4, Concept 4.2: Predicting Weather Students consider patterns in weather and why it is important to be able to predict the weather. They investigate how meteorologists predict the weather and what tools they use. Students construct scientific explanations by providing evidence of how weather data is gathered and used to forecast the weather.</p> <ul style="list-style-type: none"> • In activity 6 (Investigate Like a Scientist), students collect weather data, including air temperature, wind direction and precipitation, over a period of at least two weeks. • In activity 8 (Analyze Like a Scientist), students gather information from text and use it along with other previously obtained information to construct explanations about how different instruments measure weather aspects. • In activity 14 (Evaluate Like a Scientist), students use models to analyze and interpret weather data and look for patterns to predict future weather conditions. 	<p>Within each concept, reference tagged activities in Learn and Share (Explore, Explain, and Elaborate) for additional evidence of three dimensions.</p> <p>Grade 3, Unit 4, Concept 4.2 Digital: Enter Quick Code:</p> <ul style="list-style-type: none"> • Activity 6: ca3783s • Activity 8: ca3785s • Activity 14: ca3792s <p>Print:</p> <table border="1"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 6: p. 97-105</td> <td>Activity 6: p. 65-71</td> </tr> <tr> <td>Activity 8: p. 108</td> <td>Activity 8: p. 74-78</td> </tr> <tr> <td>Activity 14: p. 123-126</td> <td>Activity 14: p. 88-91</td> </tr> </tbody> </table>	TE Pages	SE Pages	Activity 6: p. 97-105	Activity 6: p. 65-71	Activity 8: p. 108	Activity 8: p. 74-78	Activity 14: p. 123-126	Activity 14: p. 88-91
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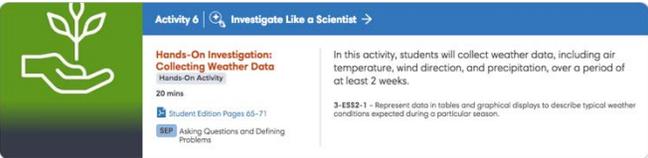
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<p>F4. Presence of a Logical Sequence of Learning.</p>	<div data-bbox="453 331 1136 496">  <p>Activity 6 Investigate Like a Scientist →</p> <p>Hands-On Investigation: Collecting Weather Data Hands-On Activity 20 mins Student Edition Pages 65-71 SEP Asking Questions and Defining Problems</p> <p>In this activity, students will collect weather data, including air temperature, wind direction, and precipitation, over a period of at least 2 weeks.</p> <p>3-ESS2-1 - Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> </div> <div data-bbox="453 532 1136 688">  <p>Activity 8 Analyze Like a Scientist →</p> <p>How Much? Literacy 20 mins Student Edition Pages 74-78</p> <p>In this activity, students gather information from text, integrate it with previously obtained information from media, and use it to construct explanations about how different instruments measure various aspects of weather.</p> <p>3-ESS2-1 - Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> </div> <div data-bbox="453 724 1136 880">  <p>Activity 14 Evaluate Like a Scientist →</p> <p>Predicting the Weather from Patterns Formative Item 20 mins Student Edition Pages 88-91 SEP Analyzing and Interpreting Data</p> <p>In this activity, students use models to analyze and interpret weather data and look for patterns to predict future weather conditions.</p> <p>3-ESS2-1 - Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> </div>	

Designed for CA NGSS: Monitoring Student Progress

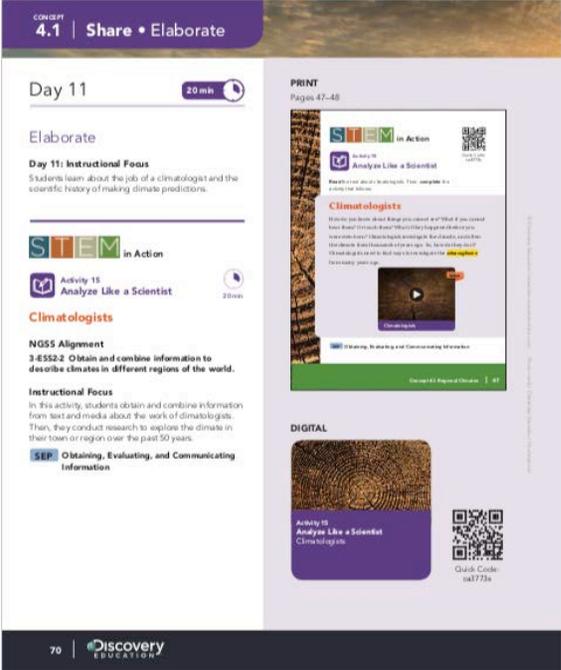
Component	Strengths	Citations		
<p>SP1. Quality of supports for monitoring 3D learning and EP&Cs integration.</p>	<p>Assessments are designed to:</p> <ul style="list-style-type: none"> • ensure that students use SEPs integrated with DCIs and CCCs to demonstrate their understanding of phenomena and/or design solutions to problems. • connect student learning experiences to the targeted learning goals. • elicit observable evidence of students' knowledge of and ability to use grade-level-appropriate elements of the three dimensions. • ensure that students use EP&Cs where applicable to demonstrate their understanding of environmental phenomenon/problem solution. <p>California Science Techbook fosters a dynamic classroom environment where students interact with printed text, digital resources, and hands-on activities, all which create three-dimensional learning experiences. Each concept in California Science Techbook purposefully layers each dimension of the NGSS, so students can authentically demonstrate the SEPs and CCCs. Student progression against all three of the dimensions can be achieved through a system of assessment opportunities.</p>	<p>Student Work Tagged by SEP and CCC throughout the Wonder, Learn and Share instructional activities for both Teacher and Student:</p> <p>Grade 3: Unit 4 Print: <table border="1" data-bbox="1260 532 1692 636"> <tr> <td>TE Pages</td> </tr> <tr> <td>Three Dimensions at a Glance p. 4-5</td> </tr> </table> Digital: Grade 3, Unit 4, Concept 4.1 Learn tab: https://tinyurl.com/ybkzvqe5</p> <p>Digital: EP&C Map https://tinyurl.com/y9xt9nqt</p>	TE Pages	Three Dimensions at a Glance p. 4-5
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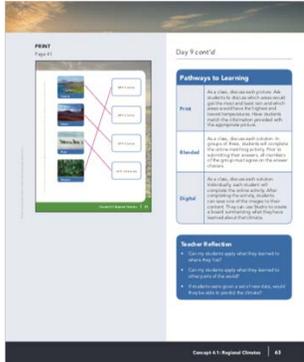
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<p>SP1. Quality of supports for monitoring 3D learning and EP&Cs integration.</p>	<p>Unit Level Alignment: Performance-Based Assessments (PBA) Students demonstrate three-dimensional learning through multiple three-dimensional prompts associated with a common scenario. Teacher Guides for each PBA describe the multidimensional nature of each item and provide sample student responses.</p> <p>Concept Level Alignment: Teacher Dashboard: Real Time Data & Differentiation Each activity is tagged by SEP and CCC designations for both the teacher and the student to help them focus on the evidence of the dimension within the activity.</p> <p>Throughout the learning progression, each tab of each concept includes Technology Enhanced Items that have students connect to what they already know about the topic (Wonder), and then as they progress, to monitor what they do learn as they explore and learn through a variety of multimodal resources (Learn, Share). Students receive feedback on their knowledge, and the teacher has real-time access to this data in the Dashboard. This real-time data allows teachers to remediate, accelerate or reinforce learning as needed, in order to help students develop metacognitive abilities.</p> <p>Based on this real-time data, teachers can then make decisions about the needs of each student and select an appropriate instructional resource within the concept to meet the students' needs. Discovery Education Experience resources deepen the pool of assets that can be assigned to students.</p>	<p>Performance-Based Unit Assessment Grade 3, Unit 4 Digital: Enter Quick Code: ca3821s</p> <p>Print:</p> <table border="1" data-bbox="1297 456 1640 594"> <tr> <td>TE Pages</td> </tr> <tr> <td>Performance-Based Assessment</td> </tr> <tr> <td>P. 208</td> </tr> </table> <p>Teacher's Guide: https://tinyurl.com/y82mld3o</p> <p>Technology Enhanced Item examples Grade 3, Unit 4, Concept 4.1 Digital: Activity 8; Evaluate Like a Scientist; Understanding Climate Zones Enter Quick Code: ca3766s</p> <p>Digital: Activity 13; Evaluate Like a Scientist; Predicting Regional Climate Enter Quick Code: ca3771s</p> <p>Video of Dashboard functionality: https://tinyurl.com/y4chmhbz</p> 	TE Pages	Performance-Based Assessment	P. 208
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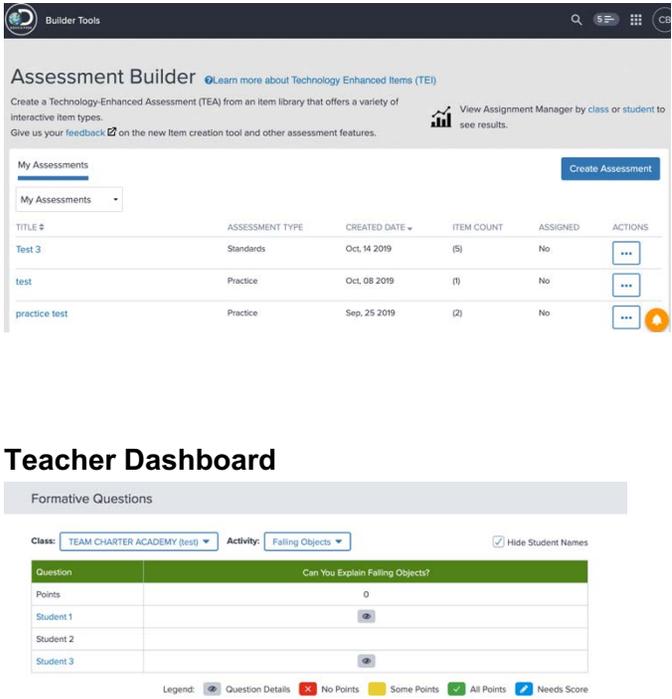
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<p>SP1. Quality of supports for monitoring 3D learning and EP&Cs integration.</p>	<p>In addition to the full Dashboard, teachers have a Results View for all individual Technology Enhanced items at point of use as well.</p> <p>Builder Tools: Assessment Builder and Discovery Studio give teachers flexibility to create customized assessments.</p>  <p>Hands-on Activities and Hands-on Investigations: Essential to the integration of a majority of science and engineering practices, hands-on activities and labs allow students to design and conduct investigations, develop models, and use the crosscutting concepts to reflect on their learning through the analysis and conclusion questions accompanying each activity. The student investigation sheet in the digital product purposefully does not provide the procedures for the investigation to encourage students to develop their own methods and processes. Scaffolded student sheets are provided in print if students require more scaffolding with the specific SEP or CCC being addressed in the activity.</p>	<p>Teacher Results Dashboard</p>  <p>Discovery Education landing page Digital: https://app.discoveryeducation.com/learn/home</p> <p>Hands-on Activity Grade 3, Unit 3, Concept 3.1 Digital: Activity 9; Think Like a Scientist; Where Did I Come From? Enter Quick Code: ca3518s</p>

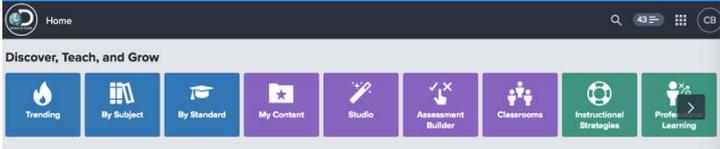
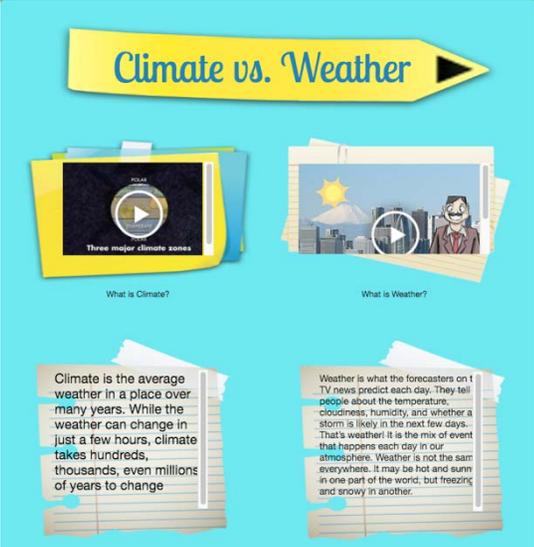
Component	Strengths	Citations								
<p>SP1. Quality of supports for monitoring 3D learning and EP&Cs integration.</p>		<p>Print:</p> <table border="1" data-bbox="1260 289 1858 391"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 9 p. 55-58</td> <td>Activity 9 p. 28-31</td> </tr> </table>  <p>Hands-on Investigation Grade 3, Unit 4, Concept 4.2 Digital: Activity 6; Investigate Like a Scientist; Hands-On Investigation: Weather Data Enter Quick Code: ca3783s</p> <p>Print:</p> <table border="1" data-bbox="1260 881 1858 984"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 6 p. 97-105</td> <td>Activity 6 p. 65-71</td> </tr> </table> 	TE Pages	SE Pages	Activity 9 p. 55-58	Activity 9 p. 28-31	TE Pages	SE Pages	Activity 6 p. 97-105	Activity 6 p. 65-71
TE Pages	SE Pages									
Activity 9 p. 55-58	Activity 9 p. 28-31									
TE Pages	SE Pages									
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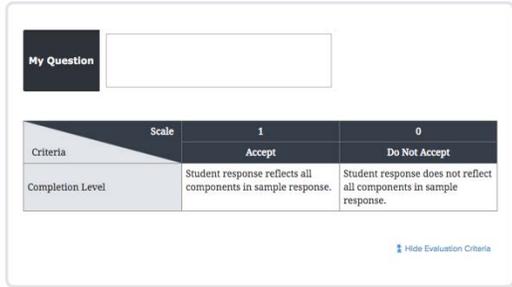
Component	Strengths	Citations				
<p>SP1. Quality of supports for monitoring 3D learning and EP&Cs integration.</p>	<p>Online Interactive Models: Students have the opportunity to manipulate various online models found in every concept to collect data and test out their ideas. The analysis of the data collected from the interactives serves as an assessment opportunity for teachers and student reflection.</p> 	<p>Online Interactive Grade 3, Unit 4, Concept 4.1 Digital: Activity 6; Observe Like a Scientist; Exploring Regional Climates Enter Quick Code: ca3764s</p> <p>Teacher’s Guide: https://tinyurl.com/y95j5ju6</p> <p>Print:</p> <table border="1" data-bbox="1260 605 1858 711"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 6 p. 41-43</td> <td>Activity 6 p. 20-21</td> </tr> </table> <p>Beyond tab – Additional Interactives and Resources Digital: https://tinyurl.com/yaeotyzt</p>	TE Pages	SE Pages	Activity 6 p. 41-43	Activity 6 p. 20-21
TE Pages	SE Pages					
Activity 6 p. 41-43	Activity 6 p. 20-21					

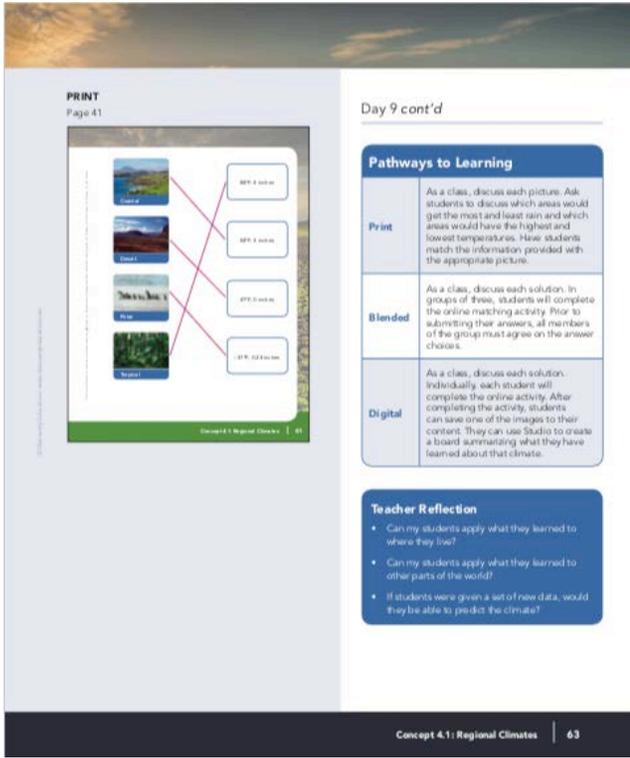
Component	Strengths	Citations				
<p>SP1. Quality of supports for monitoring 3D learning and EP&Cs integration.</p>	<p>STEM in Action and Project Starters: Options for students to further elaborate on the disciplinary core ideas through the application of various SEPs and CCCs can be found in the STEM Project Starter section under Beyond as well as in the STEM Connect resource within the Science Techbook bundle. Many of the STEM Project Starters allow students the opportunity to dive deeper into the CA EP&C and research related topics or design engineering solutions to problems related to the environment.</p>  <p>The screenshot shows a digital learning interface for 'STEM in Action' on 'Day 11'. It features sections for 'Elaborate', 'Instructional Focus', 'NGSS Alignment', and 'Instructional Focus'. A 'PRINT' preview shows a page with a QR code and a 'DIGITAL' section with another QR code and the quick code 'ca3773s'. The page number '70' and 'Discovery Education' logo are visible at the bottom.</p>	<p>STEM in Action Grade 3, Unit 4, Concept 4.1 Digital: Activity 15; Analyze Like a Scientist; Climatologist Enter Quick Code: ca3773s</p> <p>Print:</p> <table border="1" data-bbox="1262 496 1858 602"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 15 p. 70-71</td> <td>Activity 15 p. 47-49</td> </tr> </table> <p>STEM Project Starter Grade 3, Unit 4, Concept 4:1</p> <p>Digital: Extension 2: Design a Dog House https://tinyurl.com/yclo635m</p>	TE Pages	SE Pages	Activity 15 p. 70-71	Activity 15 p. 47-49
TE Pages	SE Pages					
Activity 15 p. 70-71	Activity 15 p. 47-49					

Component	Strengths	Citations
<p>SP2. Quality of capturing student progress over time.</p>	<p>Assessments are designed to:</p> <ul style="list-style-type: none"> ensure that students use SEPs integrated with DCIs and CCCs to demonstrate their understanding of phenomena and/or design solutions to problems. connect student learning experiences to the targeted learning goals. elicit observable evidence of students' knowledge of and ability to use grade-level-appropriate elements of the three dimensions. ensure that students use EP&Cs where applicable to demonstrate their understanding of environmental phenomenon/problem solution. <p>California Science Techbook is an interactive, digital resource designed to provide students with multimodal content to enhance and personalize the learning experience. The entire Wonder, Learn, Share (5E) learning cycle described in previous responses utilizes digital content to construct meaningful, interactive lessons—with embedded assessment. Examples of these formative and summative types of assessments include, but are not limited to:</p> <p>Multidimensional Technology Enhanced Items (TEIs)</p> <p>TEIs have been embedded throughout each concept to uncover what students know and allow students to demonstrate three-dimensional proficiency of the academic standards. Student responses feed directly to the Teacher Dashboard, providing instant access to data to inform instruction. Each TEI has three distinct features: an evidence statement, instructional feedback, and scoring expectations.</p>	<p>Video of Dashboard functionality: https://tinyurl.com/y4chmhbz</p>  <p>Technology Enhanced Item examples Grade 3, Unit 4, Concept 4.1 Digital: Activity 8; Evaluate Like a Scientist; Understanding Climate Zones Enter Quick Code: ca3766s</p> <p>Digital: Activity 13; Evaluate Like a Scientist; Predicting Regional Climate Enter Quick Code: ca3771s</p> 

Component	Strengths	Citations
<p>SP2. Quality of capturing student progress over time.</p>	<p>Assessment Builder Discovery Education’s Assessment Builder offers a unique opportunity to effectively assess individual student performance, both on the part of the teacher and for student self-assessment. The Assessment Builder tool also provides remediation content suggestions for areas in which students may need further work. Class and individual reports serve as a mechanism to measure performance easily in all content areas, provide feedback, and inform educators how to best support individual student growth and improvement. Teachers can utilize pre-created concept and unit assessments or create their own, including standards-based assessments and teacher-created items.</p> <p>Because the assessment of students is an ongoing process that occurs throughout each lesson, other formative and self-assessment types are embedded throughout digital and print lessons in order to provide benchmarks that show student progress in preparation for the final measure, the summative assessment. Constructed response items, hands-on lab worksheets, and Scientific Explanation sheets include rubrics for scoring, visible to teacher and student. Online responses are compiled and displayed for teachers in a dashboard. Names can be removed from the dashboard and the response order randomized so that responses can be used for class discussion and the selection of student exemplars. The Teaching Learning Dashboard in California Science Techbook allows teachers to track student progress on assessment items, with easy-to-read color coding, also known as traffic light scoring.</p>	<p>Step by Step Guide to Assessment Builder: https://tinyurl.com/y5r2465g</p>  <p>The image shows two screenshots from the Discovery Education Assessment Builder. The top screenshot is the 'Assessment Builder' main interface, featuring a 'My Assessments' table with columns for Title #, Assessment Type, Created Date, Item Count, Assigned, and Actions. The bottom screenshot is the 'Teacher Dashboard' for 'Formative Questions', displaying a table with columns for Question, Points, and a legend for Question Details, No Points, Some Points, All Points, and Needs Score.</p>

Component	Strengths	Citations			
<p>SP2. Quality of capturing student progress over time.</p>	<p>The Studio tool allows students to collect their evidence and progression throughout the course, as well as serve as a collaborative tool for students to share their work with their classmates and teachers. Templates within Studio, such as the scientific explanation, allow students to document their explanations over time. Students can use this evidence to reflect on their progression with the three dimensions.</p>  <p>Teacher Reflection Questions: Within critical points in the learning sequence, teachers are provided with questions that ask them to reflect on the three-dimensional learning of their students. These reflection questions are found in both the digital and print teacher resources.</p> <div data-bbox="579 1052 1058 1305" style="background-color: #008080; color: white; padding: 10px; border-radius: 10px;"> <p>Teacher Reflection Based on my data:</p> <ul style="list-style-type: none"> • What content do my students already know? • What misconceptions do my students have? • Are any of my students ready for extension at this point in the lesson? </div>	<p>Studio board</p>  <p>Step by Step Guide to Studio: https://tinyurl.com/y8rt7us2</p> <p>Teacher Reflection Questions Grade 3, Unit 4, Concept 4.1 Print:</p> <table border="1" data-bbox="1297 1143 1640 1247"> <tr> <td>TE Pages</td> </tr> <tr> <td>Activity 5</td> </tr> <tr> <td>p. 38</td> </tr> </table>	TE Pages	Activity 5	p. 38
TE Pages					
Activity 5					
p. 38					

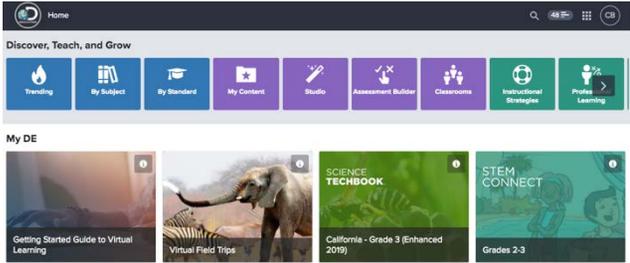
Component	Strengths	Citations																
<p>SP3. Quality of guidance and tools that use a variety of measures.</p>	<p>Assessments are matched to targeted learning goals and elicit a full range of student thinking by:</p> <ul style="list-style-type: none"> • providing clear expectations (e.g., rubric) to students so they understand how they can demonstrate their knowledge. • using a variety of measures (e.g., performance tasks, discussion questions, constructed response questions, project- or problem-based tasks, portfolios, and justified multiple choice). • providing set(s) of tasks so that students can demonstrate their understanding of the same learning goals in multiple ways. <p>Discovery Education Evidence: Discovery Education supports students throughout their learning journey, with an end goal of students achieving proficiency in defined learning goals. Within the Discovery Education Comprehensive Science Program, varied formative and summative assessments are embedded into the Wonder, Learn, Share (5E) learning cycle for each concept, along with assessments at the unit level.</p> <p>Learning Targets: Every concept in the Student Edition begins with learning targets written in the form of “I Can” statements. These are used to articulate clear learning expectations for students.</p>	<p>Evaluation Criteria (rubric) Grade 3, Unit 4, Concept 4.1</p> <p>Digital: Activity 14; Record Evidence Like a Scientist; Droughts Enter Quick Code: ca3772s</p> <p>Print:</p> <table border="1" data-bbox="1257 534 1858 639"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 14 p. 64-67</td> <td>Activity 14 p. 42-46</td> </tr> </table> <div data-bbox="1346 673 1858 1003"> <p>My Question</p>  <table border="1" data-bbox="1346 834 1858 927"> <thead> <tr> <th></th> <th>Scale</th> <th>1</th> <th>0</th> </tr> </thead> <tbody> <tr> <td>Criteria</td> <td></td> <td>Accept</td> <td>Do Not Accept</td> </tr> <tr> <td>Completion Level</td> <td></td> <td>Student response reflects all components in sample response.</td> <td>Student response does not reflect all components in sample response.</td> </tr> </tbody> </table> <p>Hide Evaluation Criteria</p> </div> <p>Grade 3, Unit 4, Concept 4.1 Student Objectives</p> <div data-bbox="1413 1076 1797 1344"> <p>Student Objectives</p> <p>By the end of this lesson:</p> <ul style="list-style-type: none"> <input type="checkbox"/> I can explain the pattern of Earth's climates and the predictable changes that occur every year in the climates. <input type="checkbox"/> I can make a model that describes what things cause Earth to have different climates and how those things can change Earth's climates over long periods of time. <input type="checkbox"/> I can use evidence to show that distance from a coast will affect the climate of an area. <input type="checkbox"/> I can observe large-scale climate patterns to predict smaller-scale weather conditions. </div>	TE Pages	SE Pages	Activity 14 p. 64-67	Activity 14 p. 42-46		Scale	1	0	Criteria		Accept	Do Not Accept	Completion Level		Student response reflects all components in sample response.	Student response does not reflect all components in sample response.
TE Pages	SE Pages																	
Activity 14 p. 64-67	Activity 14 p. 42-46																	
	Scale	1	0															
Criteria		Accept	Do Not Accept															
Completion Level		Student response reflects all components in sample response.	Student response does not reflect all components in sample response.															

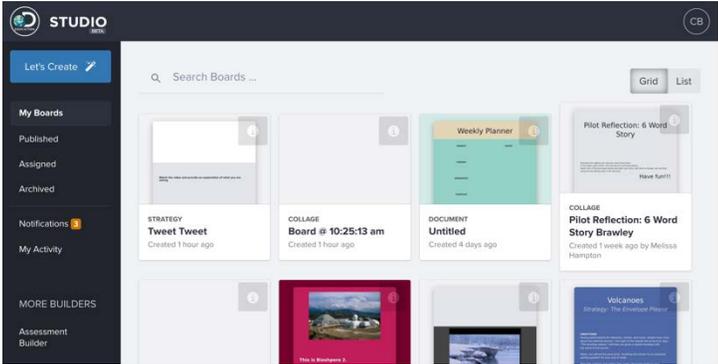
Component	Strengths	Citations
<p>SP3. Quality of guidance and tools that use a variety of measures.</p>	<p>Various Measures: There are a variety of measures throughout California Science Techbook that allow students to demonstrate their learning. Examples of these various assessments include, but are not limited to:</p> <p>Technology Enhanced Items (TEIs) in each concept allow students to demonstrate three-dimensional proficiency of the performance expectations. Student responses feed directly to the Teacher Dashboard, providing instant access to data to inform instruction. Each TEI has built-in scaffolded feedback for students, and a variety of TEI types that are aligned to the CAST item types are integrated across each concept.</p>	<p>Technology Enhanced Item Grade 3, Unit 4, Concept 1 Digital: Activity 8; Evaluate Like a Scientist; Understanding Climate Zones Enter Quick Code: ca3766s</p> <p>Digital: Activity 13; Evaluate Like a Scientist; Predicting Regional Climate Enter Quick Code: ca3771s</p>  <p>The screenshot shows a digital activity page for 'Day 9 cont'd'. It features a matching exercise with four climate images on the left and four labels on the right: 'Wet and cold', 'Wet and warm', 'Dry and cold', and 'Dry and hot'. Lines connect the images to their corresponding labels. Below the matching exercise is a 'Pathways to Learning' section with three options: 'Print', 'Blended', and 'Digital', each with a brief description of the activity. At the bottom, there is a 'Teacher Reflection' section with three bullet points: 'Can my students apply what they learned to where they live?', 'Can my students apply what they learned to other parts of the world?', and 'If students were given a set of new data, would they be able to predict the climate?'. The page number '63' is visible in the bottom right corner.</p>

Component	Strengths	Citations								
<p>SP3. Quality of guidance and tools that use a variety of measures.</p>	<p>Summative Assessments are in each concept’s Share section, with their results displayed in the Teacher Dashboard. These assessments include multiple types of TEIs, including drag and drop, select all that apply, and read and highlight items, to name a few. Teachers are able to identify areas of strength and weakness on each assessment for each student and subsequently provide remediation to ensure the achievement of proficiency for all students.</p> <p>Scientific Explanations: Scientific Explanations allow students to analyze complex text and authentic data and evaluate information to support a student-generated claim. Following the Claim-Evidence- Reasoning format, students and teachers can review and provide feedback to one another to increase the rigor of the response throughout a concept, unit, or course.</p>	<p>Summative Concept Assessment Grade 3, Unit 4, Concept 4.1 Digital: Enter Quick Code: ca3774s</p> <p>Print:</p> <table border="1" data-bbox="1260 487 1864 625"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 16, Review: Regional Climates p. 84-85</td> <td>Activity 16, Review: Regional Climates p. 50-51</td> </tr> </tbody> </table> <p>Digital: Summative Concept Assessment https://tinyurl.com/ydxsrab4 Note: Make sure <i>Teacher View On</i></p> <p>Scientific Explanations Grade 3, Unit 4, Concept 4.2 Digital: Activity 6; Investigate Like a Scientist; Hands-On Investigation: Weather Data Enter Quick Code: ca3783s</p> <p>Print:</p> <table border="1" data-bbox="1260 1112 1864 1214"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 6 p. 97-105</td> <td>Activity 6 p. 65-71</td> </tr> </tbody> </table> <p>Editable Activity for Students and Teacher’s Guide: https://tinyurl.com/yam5cx57 Note: Make sure <i>Teacher View On</i></p>	TE Pages	SE Pages	Activity 16, Review: Regional Climates p. 84-85	Activity 16, Review: Regional Climates p. 50-51	TE Pages	SE Pages	Activity 6 p. 97-105	Activity 6 p. 65-71
TE Pages	SE Pages									
Activity 16, Review: Regional Climates p. 84-85	Activity 16, Review: Regional Climates p. 50-51									
TE Pages	SE Pages									
Activity 6 p. 97-105	Activity 6 p. 65-71									

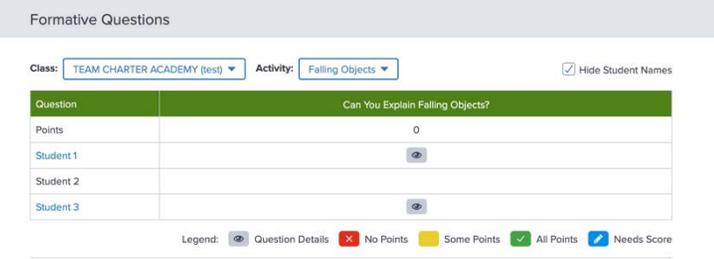
Component	Strengths	Citations
<p>SP3. Quality of guidance and tools that use a variety of measures.</p>		 <p>Hands-On Activity: Collecting Weather Data In this activity, students will collect weather data including air temperature, wind direction, and precipitation.</p> <p>Editable Activity Teacher's Guide</p> <p>Scientific Explanation Teacher Rubric https://tinyurl.com/y6mmlhrz Note: Make sure <i>Teacher View On</i></p>  <p>Scientific Explanations What Is a Scientific Explanation?</p> <p>Engaging in argument from evidence lies at the core of scientific practice. In science, the production of knowledge depends on a process of reasoning that requires a scientist to make a justified claim about the world (NRC, 2012). This process is modeled in the science classroom when students construct a scientific explanation. Scientific explanations are student responses that provide an explanation of a scientific phenomenon supported by evidence. Students prepare their scientific explanation after a period of exploration and investigation in which they generate, collect, and analyze data and then use it to construct meaning. Student scientific explanations are integrated into the 5E structure of Science Techbook.</p> <p>In Science Techbook, the scientific explanation is initiated in Engage using the Can You Explain (CYE) question¹ that requires students to answer a question about real-world phenomena. The Explore section is framed to address this question and provide essential focus for their learning (NRC, 2007). In Explain, students construct their scientific explanation. Their scientific explanation is built around three components: the claim, the evidence, and the reasoning (adapted from MacNeill & Krajcik, 2008).</p> <p>Claim: This is a testable statement or conclusion that answers the question. The claim is often the simplest part of the explanation for students to both identify and formulate.</p> <p>Evidence: This data helps to answer the question or problem that the students are examining. Data can come from a variety of sources, such as investigations (both numeric and observational data), text, archived data, video, and other media. The key to evidence is that it must be both appropriate and sufficient to support the claim. A good scientific explanation uses only data that supports the claim. The term <i>sufficient</i> in this case refers to whether there is enough data to support the claim.</p> <p>Reasoning: This is the justification that shows why the data is relevant and supports the claim. Students should try to include details related to the application of scientific principles and accurately incorporate discipline-specific vocabulary in this section.</p>

Component	Strengths	Citations								
<p>SP3. Quality of guidance and tools that use a variety of measures.</p>	<p>Hands-On Activities and Hands-On Labs (HOAs and HOLs) provide opportunities for students to demonstrate the science and engineering practices and analyze data to look for evidence of crosscutting concepts. Based on the proficiency of the students, teachers can determine the appropriate amount of scaffolding to provide. Analysis and conclusion questions allow students to reflect on their learning.</p> <p>STEM Connect projects use an interdisciplinary approach to push students to seek solutions to important real-world challenges such as sustainable farming, water conservation and other environmental critical issues. STEM Connect is built using a 4Cs STEM framework to allow students to develop the 21st-century skills of creativity, critical thinking, communication, and collaboration. Using STEM Connect projects to assess students' science learning provides the teacher with set(s) of tasks so that students can demonstrate their understanding of the same learning goals in multiple ways.</p>	<p>Hands-on Activity Grade 3, Unit 3, Concept 3.1 Digital: Activity 9; Think Like a Scientist; Where Did I Come From? Enter Quick Code: ca3518s</p> <p>Print:</p> <table border="1" data-bbox="1257 550 1858 656"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 9 p. 55-58</td> <td>Activity 9 p. 28-31</td> </tr> </table> <div data-bbox="1257 701 1950 846">  </div> <p>Hands-on Investigation Grade 3, Unit 4, Concept 4.2 Digital: Activity 6; Investigate Like a Scientist; Hands-On Investigation: Weather Data Enter Quick Code: ca3783s</p> <p>Print:</p> <table border="1" data-bbox="1257 1143 1858 1248"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 6 p. 97-105</td> <td>Activity 6 p. 65-71</td> </tr> </table>	TE Pages	SE Pages	Activity 9 p. 55-58	Activity 9 p. 28-31	TE Pages	SE Pages	Activity 6 p. 97-105	Activity 6 p. 65-71
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Component	Strengths	Citations
<p>SP3. Quality of guidance and tools that use a variety of measures.</p>		<p>STEM Connect</p>  <p>Grade 2-3: Power of the Sun https://tinyurl.com/y8shasfj</p> <p>STEM Solution Seekers: Power of the Sun Reading Passage: https://tinyurl.com/y8ebyca5</p> 

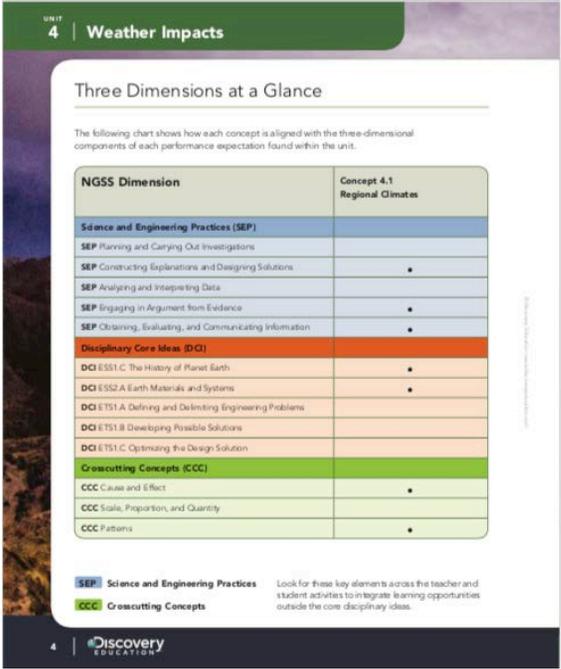
Component	Strengths	Citations
<p>SP3. Quality of guidance and tools that use a variety of measures.</p>	<p>Assessment Tools, including Discovery Experience Resources, provide teachers and students with ample resources not only to build different types of assessments but also to provide students with a unique set of tools that allows them to demonstrate their learning in unique ways. Tools like Assignment Builder, Assessment Builder, Writing Prompt Builder, and Discovery Studio give teachers flexibility to create customized assessments. Discovery Education’s Studio also provides students with a “digital poster” to make their learning collaborative and public while also using the 200,000 Experience robust digital content assets to build, enhance, and enrich their understanding.</p> 	<p>Step by Step Guide to Assessment Builder: https://tinyurl.com/y5r2465g</p> <p>Step by Step Guide to Studio: https://tinyurl.com/y8rt7us2</p>

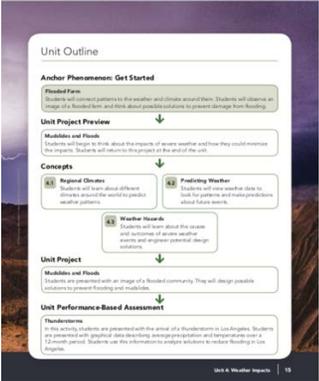
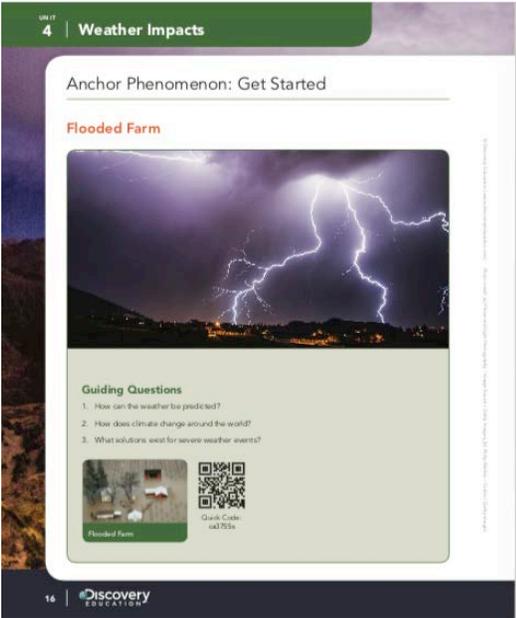
Component	Strengths	Citations			
<p>SP4. Quality of support and strategies for ensuring equitable access.</p>	<p>Assessments are designed to be:</p> <ul style="list-style-type: none"> • free from bias (e.g., gender, racial, socioeconomic status, cultural). • accessible to all students (e.g., reading level, accommodations). <p>Assessment items developed for California Science Techbook allow all students the ability to demonstrate their disciplinary core knowledge. Math tools such as the scientific calculator, unit converter, and graphing calculator are available for use at all times by students, including in the unit-level performance-based assessment (PBA). The students do not need to access prior experiences to complete the unit assessments and are provided with all necessary text and factual information needed to meet the intent of each item.</p> <p>Summative unit-level performance-based assessments are available in Spanish. For Technology Enhanced Items (TEIs) within each concept, the adaptability of the Discovery Education platform to work with Google Translate allows students to access additional languages beyond Spanish.</p>	<p>Performance-based Unit Assessment Grade 3, Unit 4 Digital: Enter Quick Code: ca3821s</p> <p>Print:</p> <div data-bbox="1297 456 1640 594" style="border: 1px solid black; padding: 5px;"> <p>TE Pages Performance-Based Assessment P. 208</p> </div> <p>Teacher’s Guide: https://tinyurl.com/y82mld3o</p> <p>Math Tools</p> <div data-bbox="1339 727 1864 1068" style="border: 1px solid gray; padding: 5px;"> <p>More Tools and Actions</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p>LANGUAGE AND LEVEL</p> <ul style="list-style-type: none"> English Reading Level A English Reading Level B Spanish <p>PRINT OPTIONS</p> <ul style="list-style-type: none"> Print Page Print Tab Print Concept </td> <td style="vertical-align: top;"> <p>ACTIONS</p> <ul style="list-style-type: none"> Share Add to QuickList Add to My Content </td> <td style="vertical-align: top;"> <p>TOOLS</p> <ul style="list-style-type: none"> Concept Dashboard Glossary Notebook Calculator Unit Converter Whiteboard </td> </tr> </table> </div> <p>TEI translated into simplified Chinese using Google Translate.</p> <div data-bbox="1455 1206 1749 1409" style="border: 1px solid gray; padding: 5px;"> <p>改变的事情</p>  </div>	<p>LANGUAGE AND LEVEL</p> <ul style="list-style-type: none"> English Reading Level A English Reading Level B Spanish <p>PRINT OPTIONS</p> <ul style="list-style-type: none"> Print Page Print Tab Print Concept 	<p>ACTIONS</p> <ul style="list-style-type: none"> Share Add to QuickList Add to My Content 	<p>TOOLS</p> <ul style="list-style-type: none"> Concept Dashboard Glossary Notebook Calculator Unit Converter Whiteboard
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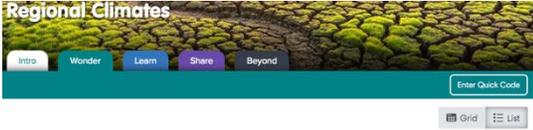
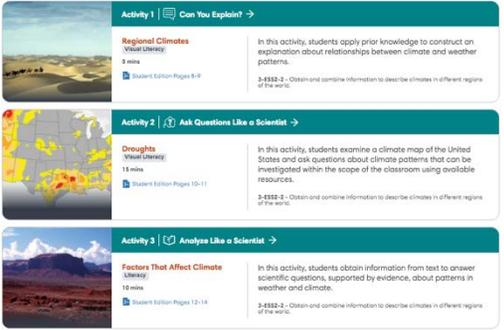
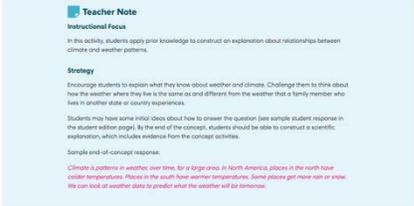
Component	Strengths	Citations				
<p>SP5. Quality of use of formative and summative assessments.</p>	<p>The materials provide self- or peer-assessments that allow students to reflect on and monitor their learning over time.</p> <p>Students can monitor their progress across a course using the student level dashboard. The dashboard includes color-coded, or traffic light scoring, for each technology-enhanced item found within a concept.</p>  <p>As students progress through concepts, there are many opportunities that are provided for reflection throughout the Student Edition. Teacher embedded notes throughout also guide students to reflect on their new thinking.</p>	<p>Peer Conversation Grade 3, Unit 4, Concept 4.1 Digital: Activity 4; Observe Like a Scientist; Global Climate Zones Enter Quick Code: ca3762s</p> <p>Print:</p> <table border="1" data-bbox="1260 560 1858 662"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 4 p. 34-35</td> <td>Activity 4 p. 15</td> </tr> </table> <p>Teacher Embedded Notes</p> 	TE Pages	SE Pages	Activity 4 p. 34-35	Activity 4 p. 15
TE Pages	SE Pages					
Activity 4 p. 34-35	Activity 4 p. 15					

Component	Strengths	Citations				
<p>SP5. Quality of use of formative and summative assessments.</p>	<p>Additionally, students can reflect on their growth in the development of scientific explanations constructed during the Explain portion of each lesson. Students will learn to increase the rigor and relevance of the evidence embedded within their explanations. The “your ideas” item found in Wonder (Engage) under the Can You Explain (CYE) question allows students to record initial ideas or responses to the questions. Students can compare their initial responses after constructing their explanations in Share (Explain). Students can review and provide feedback to one another throughout.</p> <div data-bbox="548 654 921 1133" data-label="Image"> </div> <p>The Discovery Education Studio creation tool allows students to create portfolios of their work over a course, unit, or concept. Students can collaborate with other students using the Studio tool, as well as share examples of their work with the teacher and their classmates.</p>	<p>Explain activity Grade 3, Unit 4, Concept 4.1</p> <p>Digital: Activity 14; Record Evidence Like a Scientist Enter Quick Code: ca3772s</p> <p>Print:</p> <table border="1" data-bbox="1257 500 1858 605"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 14 p. 64-67</td> <td>Activity 14 p. 42-46</td> </tr> </table> <div data-bbox="1465 649 1734 967" data-label="Image"> </div> <p>Step by Step Guide to Studio: https://tinyurl.com/y8rt7us2</p> <div data-bbox="1409 1073 1791 1414" data-label="Image"> </div>	TE Pages	SE Pages	Activity 14 p. 64-67	Activity 14 p. 42-46
TE Pages	SE Pages					
Activity 14 p. 64-67	Activity 14 p. 42-46					

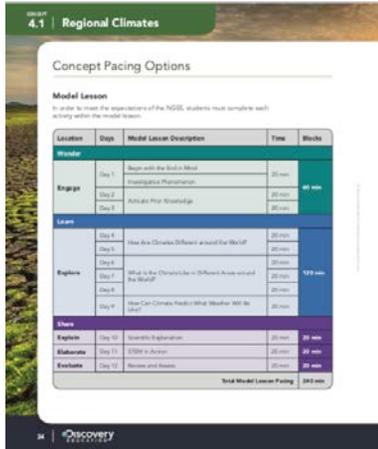
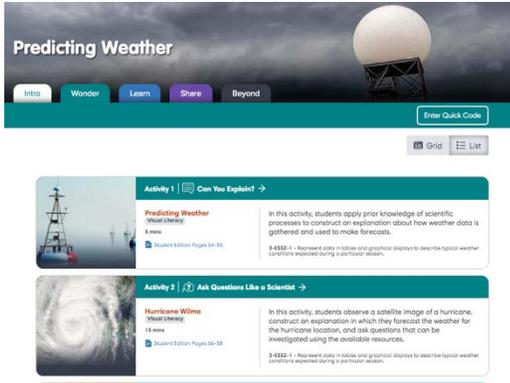
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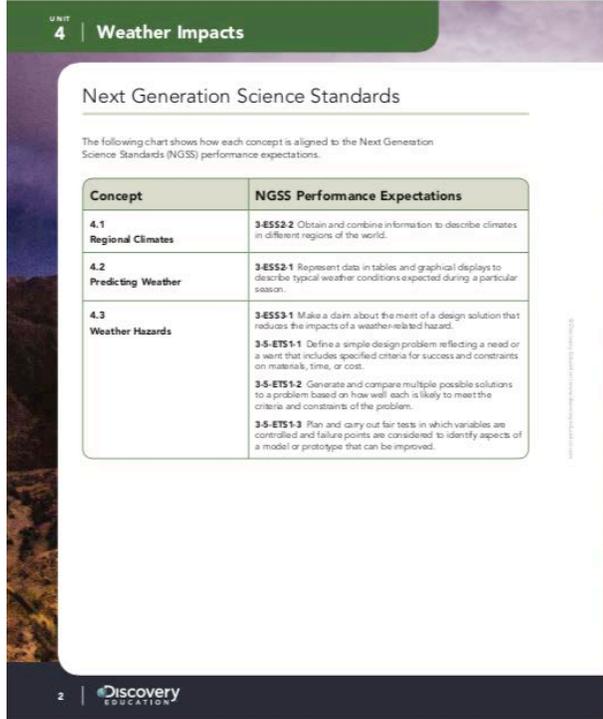
Component	Strengths	Citations																																				
<p>TS1. Phenomena/ problems Driven Three-Dimensional Learning.</p>	<p>Teacher materials provide background information about the phenomena or problems included in the learning sequence and across sequences provide:</p> <ul style="list-style-type: none"> • an explanation of the role of phenomena or problems in driving student learning. • rationale for why the unit phenomena or problems were selected for the targeted DCIs, SEPs, CCCs, and EP&Cs (when applicable). <p>Anchor and Investigative Phenomena were identified for each unit and concept based on their ability to demonstrate the disciplinary core ideas of the required performance expectations of the instructional segment bundles. Writers of California Science Techbook also considered the age appropriateness of topics to select real-world phenomena that would engage students within each grade level.</p>	<p>Three Dimensions at a Glance Grade 3, Unit 4 Print:</p> <table border="1" data-bbox="1297 505 1640 609"> <tr> <td>TE Pages</td> </tr> <tr> <td>Three Dimensions p. 4-5</td> </tr> </table>  <p>The following chart shows how each concept is aligned with the three-dimensional components of each performance expectation found within the unit.</p> <table border="1" data-bbox="1329 808 1745 1182"> <thead> <tr> <th>NGSS Dimension</th> <th>Concept 4.1 Regional Climates</th> </tr> </thead> <tbody> <tr> <td>Science and Engineering Practices (SEP)</td> <td></td> </tr> <tr> <td>SEP Planning and Carrying Out Investigations</td> <td></td> </tr> <tr> <td>SEP Constructing Explanations and Designing Solutions</td> <td>•</td> </tr> <tr> <td>SEP Analyzing and Interpreting Data</td> <td></td> </tr> <tr> <td>SEP Engaging in Argument from Evidence</td> <td>•</td> </tr> <tr> <td>SEP Obtaining, Evaluating, and Communicating Information</td> <td>•</td> </tr> <tr> <td>Disciplinary Core Ideas (DCI)</td> <td></td> </tr> <tr> <td>DCI.ESS1.C: The History of Planet Earth</td> <td>•</td> </tr> <tr> <td>DCI.ESS2.A: Earth Materials and Systems</td> <td>•</td> </tr> <tr> <td>DCI.ETS1.A: Defining and Delimiting Engineering Problems</td> <td></td> </tr> <tr> <td>DCI.ETS1.B: Developing Possible Solutions</td> <td></td> </tr> <tr> <td>DCI.ETS1.C: Optimizing the Design Solution</td> <td></td> </tr> <tr> <td>Crosscutting Concepts (CCC)</td> <td></td> </tr> <tr> <td>CCC Cause and Effect</td> <td>•</td> </tr> <tr> <td>CCC Scale, Proportion, and Quantity</td> <td></td> </tr> <tr> <td>CCC Patterns</td> <td>•</td> </tr> </tbody> </table> <p>SEP Science and Engineering Practices Look for these key elements across the teacher and student activities to integrate learning opportunities outside the core disciplinary ideas.</p> <p>CCC Crosscutting Concepts</p>	TE Pages	Three Dimensions p. 4-5	NGSS Dimension	Concept 4.1 Regional Climates	Science and Engineering Practices (SEP)		SEP Planning and Carrying Out Investigations		SEP Constructing Explanations and Designing Solutions	•	SEP Analyzing and Interpreting Data		SEP Engaging in Argument from Evidence	•	SEP Obtaining, Evaluating, and Communicating Information	•	Disciplinary Core Ideas (DCI)		DCI.ESS1.C: The History of Planet Earth	•	DCI.ESS2.A: Earth Materials and Systems	•	DCI.ETS1.A: Defining and Delimiting Engineering Problems		DCI.ETS1.B: Developing Possible Solutions		DCI.ETS1.C: Optimizing the Design Solution		Crosscutting Concepts (CCC)		CCC Cause and Effect	•	CCC Scale, Proportion, and Quantity		CCC Patterns	•
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Component	Strengths	Citations				
<p>TS1. Phenomena/ problems Driven Three-Dimensional Learning.</p>	<p>Unit Level Support: Within each Unit, a real-world anchor phenomenon piques students’ curiosity and sets a purpose for learning across concepts. A Unit Project, expects students to return to the anchor phenomenon to summarize learning across the Unit Storyline. In the print Teacher Edition, teachers are provided with several options on how to use the anchor phenomenon to engage students with asking questions and defining problems. Print and digital teacher supports also provide Unit Storylines and conceptual maps as resources of how the concepts build upon one another, related to the Anchor Phenomenon and the Unit Project.</p> <p>The Unit Outline digitally also allows teachers to quickly view the PEs associated with the investigative phenomena for each concept.</p> 	<p>Anchor Phenomenon Grade 3, Unit 4 Print:</p> <table border="1" data-bbox="1402 407 1927 578"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Anchor Phenomenon Launch p. 16</td> <td>Anchor Phenomenon: p. 2-3</td> </tr> </tbody> </table> <p>Digital: Enter Quick Code: ca3755s</p> 	TE Pages	SE Pages	Anchor Phenomenon Launch p. 16	Anchor Phenomenon: p. 2-3
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Anchor Phenomenon Launch p. 16	Anchor Phenomenon: p. 2-3					

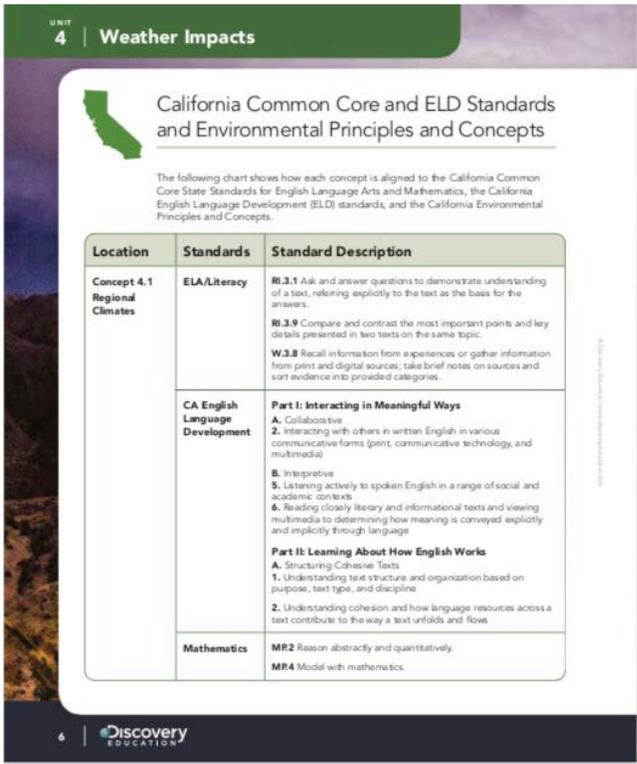
Component	Strengths	Citations				
<p>TS1. Phenomena/ problems Driven Three-Dimensional Learning.</p>	<p>Concept-Level Support: Each concept begins with a smaller, real-world investigative phenomenon allowing students to dive into the remainder of content across Wonder, Learn, Share, looking for evidence to explain the investigative phenomenon. Teachers are supported through the use of embedded teacher notes and additional strategies found in the print Teacher Edition. For example, the first teacher note found in Wonder (Engage) provides a strategy to utilize with students. A teacher can use the Can You Explain? question as a frame for learning or can encourage students to develop their own questions to explore within the concept.</p> <p>In California Science Techbook teachers receive additional support through teacher notes. Point-of-use teacher notes within each tab, additional assessments, student misconceptions, background material, and more are visible by turning on the Teacher View toggle.</p> <p>Teacher Notes: Teachers notes found in Wonder (Engage) describe how to set up an experience for students to allow the students to generate questions around the investigative phenomena. Teacher notes found within Unit Project in Share (Elaborate) help the teacher structure small groups or prepare materials needed for design activities. These strategies help both the teacher and student focus on the components of the phenomenon related to the associated DCIs for the concept.</p>	<p>Concept- Investigative Phenomenon Grade 3, Unit 4, Concept 4.1</p> <p>Print:</p> <table border="1" data-bbox="1352 407 1906 509"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 2 p. 30-31</td> <td>Activity 2 p. 10-11</td> </tr> </table> <p>Digital: Enter Quick Code: ca3760s</p>   <p>Teacher Embedded Note: Wonder (Engage)</p> 	TE Pages	SE Pages	Activity 2 p. 30-31	Activity 2 p. 10-11
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Activity 2 p. 30-31	Activity 2 p. 10-11					

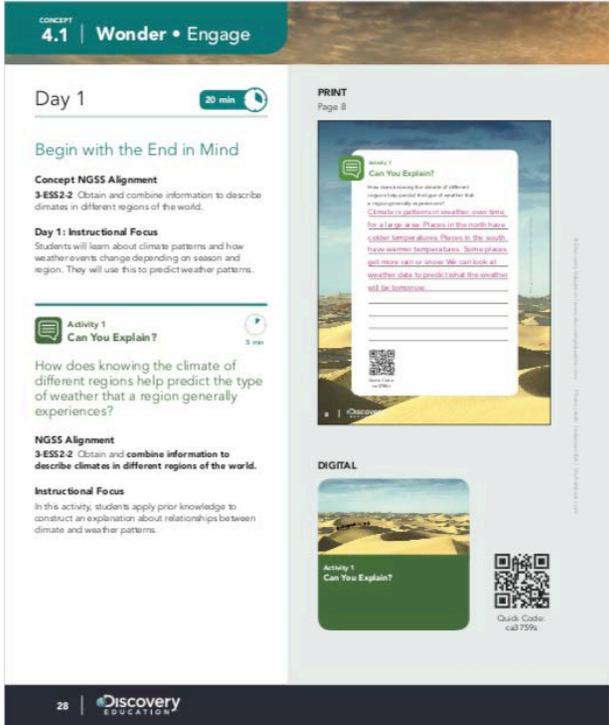
Component	Strengths	Citations		
<p>TS1. Phenomena/problems Driven Three-Dimensional Learning.</p>	<p>Teacher Guides Throughout the entire 5E learning cycle, students will be exposed to activities expecting them to generate explanations or solve problems. For the scientific explanation activity found in Share (Explain), as well as all Hands-on Activities, additional detailed teacher guides support teachers in successfully preparing and carrying out the activity with their class.</p> <p>Three-Dimensional Learning Supports: California Science Techbook includes several tiers of support to assist teachers with planning three-dimensional learning experiences. Explicit guidance for three-dimensional learning is included throughout the print Teacher Edition and the digital notes.</p> <p>NGSS standard indicators are noted at both the unit and concept level to guide teacher planning.</p> <p>Unit-Level Support</p> <ul style="list-style-type: none"> • Unit Storyline and Outline: includes an overview of the instructional segment • NGSS Chart: PEs listed by concept • Three Dimensions at a Glance Chart: SEP, DCI, and CCC by concept • ELA, ELD, and Mathematics Standards • California EPCs 	<p>Teacher’s Guide: Hands-On Investigation Grade 3, Unit 4, Concept 4.2 Digital: Activity 6: Investigate Like a Scientist, Collecting Weather Data https://tinyurl.com/ydep2na6 Note: Make sure <i>Teacher View On</i></p> <p>Teacher Hands-On: Hands-on Activity Video Digital: Activity 6: Investigate Like a Scientist, Collecting Weather Data https://tinyurl.com/y9efdavy Note: Make sure <i>Teacher View On</i></p> <p>Teacher Hands-On Activity Instructional Videos library Digital: https://tinyurl.com/yaaw8bmX</p> <p>Unit Storyline and Outline Grade 3, Unit 4 Print:</p> <table border="1" data-bbox="1297 982 1640 1057"> <tr> <td>TE Pages</td> </tr> <tr> <td>p. 14</td> </tr> </table> 	TE Pages	p. 14
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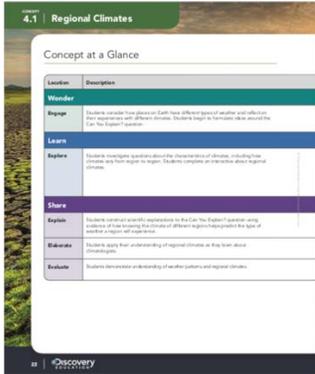
Component	Strengths	Citations						
<p>TS1. Phenomena/problems Driven Three-Dimensional Learning.</p>	<p>Concept-Level Support</p> <ul style="list-style-type: none"> Learning Objectives driven by the expectations of the NGSS Days of Instruction: <ul style="list-style-type: none"> Bolded text highlights the dimensions of the PE addressed during each activity Activity-level SEP and CCC integration Pathways for Learning guidance for a variety of technology settings Teacher reflection questions encourage reflection on students' performance across the three dimensions of NGSS Embedded Teacher Notes describe strategies on how to create a three-dimensional experience for students Differentiation Strategies to support a variety of learners <p>Concept Pacing Options</p> 	<p>Concept- Investigative Phenomenon Grade 3, Unit 4, Concept 4.2 Digital: https://tinyurl.com/y7n6q2fe</p> <p>Print:</p> <table border="1" data-bbox="1297 474 1955 587"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Concept 2: Starts on p. 84</td> <td>Concept 2: Starts on p. 54</td> </tr> </table>  <p>Concept Pacing Options Grade 3, Unit 4, Concept 4.1 Digital: https://tinyurl.com/ycpcm9dx Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 1312 1640 1421"> <tr> <td>TE Pages</td> </tr> <tr> <td>Concept 4.1 p. 24-25</td> </tr> </table>	TE Pages	SE Pages	Concept 2: Starts on p. 84	Concept 2: Starts on p. 54	TE Pages	Concept 4.1 p. 24-25
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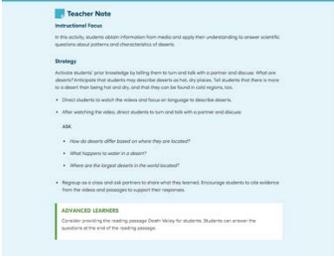
Component	Strengths	Citations											
<p>TS2. Coherence.</p>	<p>Teacher materials describe and provide a rationale for the conceptual framework and sequence of ideas, practices, and learning experiences in the learning sequences and for across sequences:</p> <ul style="list-style-type: none"> • strategies for linking student experiences across lessons to ensure student sense-making and/or problem-solving focused on phenomena or problems is linked to learning across all three dimensions. • connections to other science domains, nature of science, engineering, technology, and applications of science, math, ELA, and EP&Cs (when applicable). <p>California Science Techbook provides for coherence by:</p> <ul style="list-style-type: none"> • limiting the topics covered to the topics identified in NGSS • arranging experiences so that student understanding grows over the course of the unit. • connecting concepts over the course of the year and from one year to the next. <p>Because the courses in California Science Techbook were designed to address the requirements of NGSS, they include the core ideas, science and engineering practices, and crosscutting concepts that are identified in NGSS for a given grade. California Science Techbook addresses no more and no less than the content specified within NGSS while expanding the time and depth devoted to the core concepts.</p>	<p>Next Generation Science Standards Grade 3, Unit 4</p> <p>Print:</p> <table border="1" data-bbox="1297 440 1640 545"> <tr> <td>TE Pages</td> </tr> <tr> <td>NGSS</td> </tr> <tr> <td>p. 2</td> </tr> </table>  <p>The following chart shows how each concept is aligned to the Next Generation Science Standards (NGSS) performance expectations.</p> <table border="1" data-bbox="1377 760 1824 1040"> <thead> <tr> <th>Concept</th> <th>NGSS Performance Expectations</th> </tr> </thead> <tbody> <tr> <td>4.1 Regional Climates</td> <td>3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.</td> </tr> <tr> <td>4.2 Predicting Weather</td> <td>3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</td> </tr> <tr> <td>4.3 Weather Hazards</td> <td>3-ESS3-1 Make a dam about the merit of a design solution that reduces the impacts of a weather-related hazard. 3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. 3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</td> </tr> </tbody> </table>	TE Pages	NGSS	p. 2	Concept	NGSS Performance Expectations	4.1 Regional Climates	3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.	4.2 Predicting Weather	3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	4.3 Weather Hazards	3-ESS3-1 Make a dam about the merit of a design solution that reduces the impacts of a weather-related hazard. 3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. 3-5-ETS1-3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.
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<p>TS2. Coherence.</p>	<p>California Science Techbook provides for coherence by arranging topics so that student understanding grows over the course of a lesson and by connecting ideas from one lesson to another. Each Wonder, Learn, Share (5E) model lesson is designed for multiple sessions.</p> <p>The print Teacher Edition for California Science Techbook supports teachers as they plan their instruction to build upon the appropriate progressions related to all three dimensions of the standards.</p> <p>Unit Level Support: Three Dimensions at a Glance: Shows how each concept is aligned to the three-dimensional components of the performance expectations found within the unit.</p> <p>Scope and Sequence: Includes NGSS learning progression charts indicating the previous and next grade level progression based on the standards for the concept, as well as the unit storylines across the course.</p> <p>NGSS Overviews: Provides breakdowns of the performance expectations for the concept, as well as the ELA, ELD, and Math Standards, and California Environmental Principles associated with the Performance Expectation.</p>	<p>5E Model (Wonder, Learn, Share) Grade 3 Print:</p> <div data-bbox="1297 354 1640 459" style="border: 1px solid black; padding: 2px;"> <p>TE Pages 5E Model p. xxviii</p> </div> <div data-bbox="1297 492 1908 1219" style="border: 1px solid black; padding: 5px;"> <p style="background-color: #333; color: white; padding: 2px; text-align: center;">Instructional Flow</p> <p>The 5 Es Defined</p> <p>Science Techbook follows the 5E Model of Instruction (5Es), a research-based instructional cycle that uses complex essential questions to guide the learning experience.</p> <p>Each of the 5Es describes a phase of learning: Engage, Explore, Explain, Elaborate, and Evaluate. The 5Es allow students and teachers to experience activities that build upon prior knowledge to construct meaning and demonstrate progress toward learning goals. The 5E instructional cycle is not intended to be linear, so you can move between the 5Es for content and resources to best meet the needs of students. Recognizing the need to organize instruction into manageable segments for elementary students, Science Techbook in Grades K-5 condense the 5E model into three segments: Wonder, Learn, and Share.</p> <p>Wonder (Engage)</p> <p>In Science Techbook, Wonder provides phenomena-driven or problem-based learning experiences as catalysts for the inquiry process, triggering students' natural sense of curiosity and wonder. Students are challenged to describe real-world phenomena and to develop questions around these phenomena in addition to the Can You Explain? question. Technology-Enhanced Items (TEI) help teachers uncover what students already know about a concept, including their preconceptions and misconceptions.</p> <p>Learn (Explore)</p> <p>Providing deep experiences to support scientific learning, Learn features text and interactive resources that help students test predictions, collect evidence, and record observations and ideas. Learn also contains digital models and Hands-On Activities that provide opportunities for students to apply what they have learned.</p> <p>Share (Explain/Elaborate/Evaluate)</p> <p>This section encourages students to verbalize and demonstrate their conceptual understanding, new skills, and behaviors by constructing a scientific explanation related to the investigative phenomenon, the Can You Explain? question, or one of their own questions first posed in Wonder.</p> <p>Students can Elaborate on their thinking within the STEM in Action and STEM Project sections of Share. By presenting opportunities for critical thinking, exploration, and summative assessments, Share connects STEM skills to real-world problems.</p> <p>Students are offered multiple options for sharing what they learned through a variety of student Evaluations, including brief and extended constructed response items and multiple-choice questions.</p> <p style="text-align: right; font-size: small;">© 2018 Discovery Education</p> <p style="text-align: center; font-size: x-small;">xxviii Discovery EDUCATION</p> </div> <p>Three Dimensions at a Glance Grade 3, Unit 4 Print:</p> <div data-bbox="1297 1357 1640 1398" style="border: 1px solid black; padding: 2px;"> <p>TE Pages</p> </div>

Component	Strengths	Citations												
<p>TS2. Coherence.</p>	 <p>The following chart shows how each concept is aligned to the California Common Core State Standards for English Language Arts and Mathematics, the California English Language Development (ELD) standards, and the California Environmental Principles and Concepts.</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Standards</th> <th>Standard Description</th> </tr> </thead> <tbody> <tr> <td>Concept 4.1 Regional Climates</td> <td>ELA/Literacy</td> <td> <p>RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.</p> <p>RI.3.9 Compare and contrast the most important points and key details presented in two texts on the same topic.</p> <p>W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.</p> </td> </tr> <tr> <td></td> <td>CA English Language Development</td> <td> <p>Part I: Interacting in Meaningful Ways</p> <p>A. Collaborative</p> <p>2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia)</p> <p>B. Interpretive</p> <p>5. Listening actively to spoken English in a range of social and academic contexts</p> <p>6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language</p> <p>Part II: Learning About How English Works</p> <p>A. Structuring Cohesive Texts</p> <p>1. Understanding text structure and organization based on purpose, text type, and discipline</p> <p>2. Understanding cohesion and how language resources across a text contribute to the way a text unfolds and flows</p> </td> </tr> <tr> <td></td> <td>Mathematics</td> <td> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.4 Model with mathematics.</p> </td> </tr> </tbody> </table>	Location	Standards	Standard Description	Concept 4.1 Regional Climates	ELA/Literacy	<p>RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.</p> <p>RI.3.9 Compare and contrast the most important points and key details presented in two texts on the same topic.</p> <p>W.3.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.</p>		CA English Language Development	<p>Part I: Interacting in Meaningful Ways</p> <p>A. Collaborative</p> <p>2. Interacting with others in written English in various communicative forms (print, communicative technology, and multimedia)</p> <p>B. Interpretive</p> <p>5. Listening actively to spoken English in a range of social and academic contexts</p> <p>6. Reading closely literary and informational texts and viewing multimedia to determine how meaning is conveyed explicitly and implicitly through language</p> <p>Part II: Learning About How English Works</p> <p>A. Structuring Cohesive Texts</p> <p>1. Understanding text structure and organization based on purpose, text type, and discipline</p> <p>2. Understanding cohesion and how language resources across a text contribute to the way a text unfolds and flows</p>		Mathematics	<p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.4 Model with mathematics.</p>	<div data-bbox="1297 337 1640 444" style="border: 1px solid black; padding: 5px;"> <p>TE Pages Three Dimensions p. 4-5</p> </div> <p>Scope and Sequence Grade 3, Unit 4 Print:</p> <div data-bbox="1297 581 1640 721" style="border: 1px solid black; padding: 5px;"> <p>TE Pages Scope & Sequence overview p. xxxviii-xli</p> </div> <p>California Common Core and ELD Standards and Environmental Principles and Concepts Grade 3, Unit 4 Print:</p> <div data-bbox="1297 894 1640 1002" style="border: 1px solid black; padding: 5px;"> <p>TE Pages CCSS, ELD, & EP&Cs p. 6-8</p> </div>
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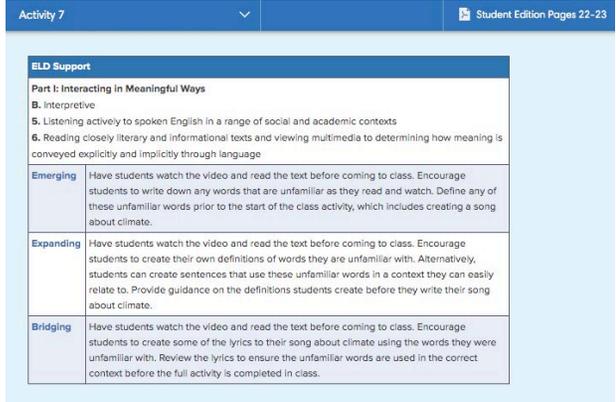
Component	Strengths	Citations
<p>TS2. Coherence.</p>	<p>Concept Level Support: Embedded within the teacher strategies for activities, teachers are provided with guidance on appropriate expectations for students’ prior knowledge based on the progression of the DCIs within each course. In Hands-on Investigations, support for teachers on how to support students’ progression with designing and carrying out investigations includes a scaffolded and open-ended approach.</p>	<p>Teacher Strategies Grade 3, Unit 4 Print: TE Pages Concept 4.1: Starts on p. 28</p> 

Component	Strengths	Citations						
<p>TS3. Effective Teaching.</p>	<p>Teacher materials support the use of and provide a rationale and evidence of effectiveness for strategies that:</p> <ul style="list-style-type: none"> • support students in learning through authentic and meaningful phenomena or design problems. • support student learning across the three dimensions. • make student thinking visible; promote reasoning, sense-making, and problem-solving; challenge student thinking; and develop metacognitive abilities <p>California Science Techbook digital and print, was designed and developed to meet the needs of students and to provide guidance and flexibility for teachers to use in a variety of classroom settings.</p> <p>Pacing and At a Glance Guides: The print Teacher Edition includes pacing guides and flexible pathways for optimal instruction in any instructional setting. The “At a Glance” supports, provide teachers with quick overviews as they prepare for instruction ahead of time.</p> <p>Days of Instruction: Instruction is presented in 20-minute segments by day. The NGSS performance expectations for the day are also featured with the specific aspects of each standard covered that day in bold. Daily and Activity Based Instructional Focus statements provide three-dimensional learning targets.</p>	<p>Concepts at a Glance Grade 3, Unit 4, Concept 4.1 Digital: https://tinyurl.com/ydd98h9o Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 459 1640 573"> <tr><td>TE Pages</td></tr> <tr><td>Concept 4.1</td></tr> <tr><td>p. 22-23</td></tr> </table> <p style="text-align: center;">○</p>  <p>Concept Pacing Options Grade 3, Unit 4, Concept 4.1 Digital: https://tinyurl.com/ycpcm9dx Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 1263 1640 1377"> <tr><td>TE Pages</td></tr> <tr><td>Concept 4.1</td></tr> <tr><td>p. 24-25</td></tr> </table>	TE Pages	Concept 4.1	p. 22-23	TE Pages	Concept 4.1	p. 24-25
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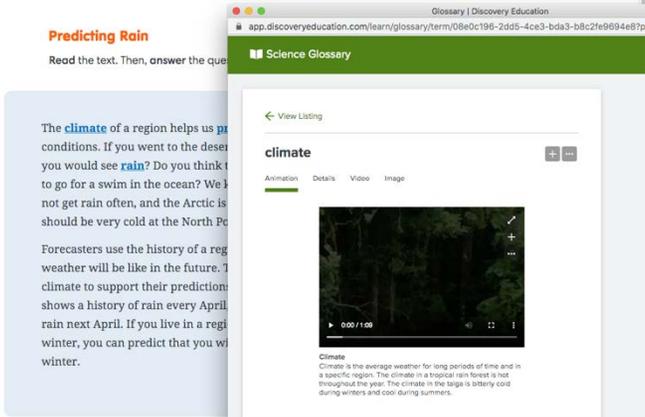
Component	Strengths	Citations			
<p>TS3. Effective Teaching.</p>	<p>Supporting 21st Century Learners: Through every step of the learning cycle, California Science Techbook features diverse and rich multimedia resources: video, images, audio, interactives, virtual labs, online models, animations, rich informational text, and more. Marquee Discovery Education content, including MythBusters, Street Science, and Outrageous Acts of Science, blend entertainment with education to motivate students to investigate real-world phenomena. Virtual labs and online models allow students to quickly manipulate variables to test out their ideas in an online environment. Pathway to Learning charts provide options for teachers to deliver three-dimensional instruction in a one to one, blended or print based classroom.</p> <p>Teacher Notes with Strategies: Detailed teacher notes, for each activity, make the connection between the high-quality digital assets and activities and the SEPs and CCCs explicit for teachers through instructional guidance. Strategies elicit student thinking and guide teachers in how to design a three-dimensional learning environment. Research-based instructional strategies, such as the Discovery Education Spotlight on Strategies (SOS), promote scientific discourse around the investigative and anchor phenomenon. SEP and CCC indicators are included for activities found in each day of instruction in the both print and digital.</p>	<p>Discovery Education Experience Digital: https://tinyurl.com/yxms7kjl</p> <p>Teacher Notes and Strategies Grade 3, Unit 4, Concept 4.1</p> <p>Digital: https://tinyurl.com/y9txt2k4 Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 651 1640 756"> <tr> <td>TE Pages</td> </tr> <tr> <td>Activity 3</td> </tr> <tr> <td>p. 51</td> </tr> </table> <p>Spotlight on Strategies (SOS) Digital: https://tinyurl.com/y62cg28n</p>  	TE Pages	Activity 3	p. 51
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Activity 3					
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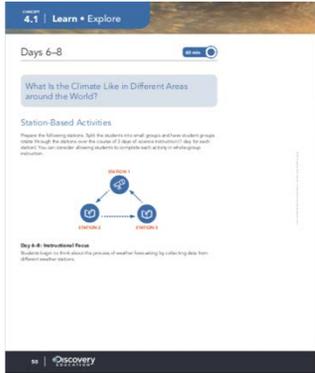
Component	Strengths	Citations																																				
<p>TS3. Effective Teaching.</p>	<p>Activities: Activity Type headers allow teachers and students to quickly identify opportunities for asking questions related to the phenomenon, communicating sensemaking, and solving problems.</p> <ul style="list-style-type: none"> • Ask Questions Like a Scientist: Students are presented with the investigative phenomenon and expected to generate their own questions to drive their learning in Learn/Explore. • Observe Like a Scientist: Students utilize scientific discourse around “Talk Together” questions to communicate their sensemaking. • Record Evidence Like a Scientist: Students reason through the evidence they have collected in Learn/Explore to construct and communicate a scientific explanation to one of their own driving questions or the Can You Explain question. • Design Solutions Like a Scientist: Students are presented with design challenges and expected to research, design, test and propose solutions. <p>Teacher Reflection Questions: Throughout each concept, professional learning questions encourage teachers to consider how activities have developed SEP and CCC proficiency with their students and how they may modify the activity to better meet the needs of their students.</p> <div data-bbox="554 1292 1085 1419" style="background-color: #008080; color: white; padding: 5px;"> <p>Teacher Reflection</p> <ul style="list-style-type: none"> • Did this activity engage the students? • Did this activity allow students to generate their own questions? • Would I introduce the concept of changing states of matter differently next year? </div>	<p>Activity Types Grade 3 Print:</p> <div data-bbox="1297 388 1640 493" style="border: 1px solid black; padding: 5px;"> <p>TE Pages Activity Types p. xxix</p> </div> <div data-bbox="1352 531 1787 1005" style="border: 1px solid black; padding: 5px;"> <p>Instructional Pathways Throughout Wonder, Learn, and Share, carefully crafted activities build in complexity to build the expectations of the standards and provide interactive experiences for students to deepen their scientific knowledge. Each activity spans the entire Student Edition, providing students with context language on how they are making an activity. The Teacher Edition not only provides direct access to the materials and teacher resources, but also offers detailed strategies on how to engage the activities in instruction.</p> <p>Activity Types in Wonder, Learn, and Share</p> <table border="1" data-bbox="1402 662 1757 961"> <thead> <tr> <th>Icon</th> <th>Student Edition Label</th> <th>Activity Description</th> </tr> </thead> <tbody> <tr> <td></td> <td>Can You Explain?</td> <td>Students compare and contrast knowledge to form their own learning.</td> </tr> <tr> <td></td> <td>Ask Questions Like a Scientist</td> <td>Students design and ask questions about the investigative phenomenon.</td> </tr> <tr> <td></td> <td>Observe Like a Scientist</td> <td>Students design and conduct an investigation to answer a question.</td> </tr> <tr> <td></td> <td>Analyze Like a Scientist</td> <td>Students analyze and evaluate data to show scientific evidence.</td> </tr> <tr> <td></td> <td>Investigate Like a Scientist</td> <td>Students conduct meaningful investigations, collect data, and reflect on their own learning.</td> </tr> <tr> <td></td> <td>Evaluate Like a Scientist</td> <td>Students design and create multidimensional learning by comparing data sets and graphs.</td> </tr> <tr> <td></td> <td>Interpret Data Like a Scientist</td> <td>Students design graphs and numerical data.</td> </tr> <tr> <td></td> <td>Solve Problems Like a Scientist</td> <td>Students apply scientific ideas to solve problems.</td> </tr> <tr> <td></td> <td>Design Solutions Like a Scientist</td> <td>Students design solutions to real-world problems.</td> </tr> <tr> <td></td> <td>Model Like a Scientist</td> <td>Students use models to represent scientific explanations of the investigative phenomenon.</td> </tr> <tr> <td></td> <td>Think Like a Scientist</td> <td>Students design and create scientific ideas through meaningful activities.</td> </tr> </tbody> </table> </div> <p>Teacher Reflection Questions Grade 3, Unit 4, Concept 4.1 Print:</p> <div data-bbox="1297 1170 1640 1312" style="border: 1px solid black; padding: 5px;"> <p>TE Page Teacher Reflection Questions p. 38</p> </div>	Icon	Student Edition Label	Activity Description		Can You Explain?	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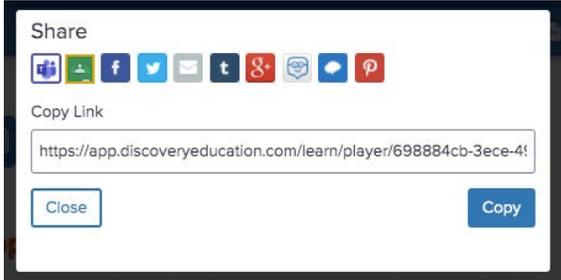
Component	Strengths	Citations				
<p>TS3. Effective Teaching.</p>	<p>Quick Digital Access: Throughout the print Student and Teacher Editions, QR Codes and short links indicate opportunities to deepen learning through rich media and/or allow students to access content in a blended print and digital environment.</p> <p>Professional Learning Center: The Professional Learning Center in California Science Techbook is an additional deep and rich resource for teachers to participate in interactive courses, see other Discovery Education teachers' classrooms, and access the online DEN community. The DEN online community is a global platform where teachers can learn, share, and connect with other educators.</p> 	<p>Quick Access from Print Grade 3, Unit 4, Concept 4.1 Print:</p> <table border="1" data-bbox="1297 407 1955 511"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 3 p. 32</td> <td>Activity 3 p. 12</td> </tr> </table> <p>QR and Quick Code in Student Edition</p>  <p>Professional Learning Center Digital: https://teachers.discoveryeducation.com/</p>	TE Pages	SE Pages	Activity 3 p. 32	Activity 3 p. 12
TE Pages	SE Pages					
Activity 3 p. 32	Activity 3 p. 12					

Component	Strengths	Citations			
<p>TS4. Support for Students with Diverse Learning Needs.</p>	<p>Teacher materials provide an array of strategies:</p> <ul style="list-style-type: none"> to support student access to the targeted learning goals, experiences, and performances. that help teachers differentiate instruction. <p>California Science Techbook California allows teachers to differentiate instruction, degrees of readiness, and interests and offers resources to help vary content, process, product, and learning environment through the core instructional pathway.</p>	<p>English Language Development Support Grade 3, Unit 4, Concept 4.1 Digital: Activity 7 Enter Quick Code: ca3765s Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 492 1640 597"> <tr> <td>TE Pages</td> </tr> <tr> <td>Activity 7</td> </tr> <tr> <td>p. 46</td> </tr> </table> 	TE Pages	Activity 7	p. 46
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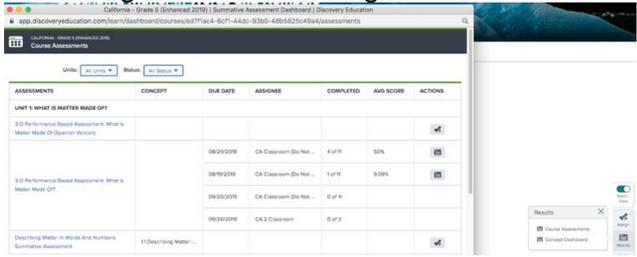
Component	Strengths	Citations						
<p>TS4. Support for Students with Diverse Learning Needs.</p>	<p>Content-Specific Differentiation Strategies: Within the Print Teacher Edition and Digital Teacher notes, teachers are provided with differentiation strategies, including scaffolded support for English language learners, struggling students, and advanced students, specific to the concept and that include reference to the use of multimedia assets. These differentiation strategies are provided at point of use.</p> <p>Student Interactive Worktext Tools:</p> <ul style="list-style-type: none"> • Text read-aloud features • Lexile and language options • Highlighting and note-taking • Interactive glossary 	<p>Differentiation Strategies Grade 3, Unit 4, Concept 4.3 Digital: Activity 16 Enter Quick Code: ca3816s Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 496 1640 602"> <tr> <td>TE Pages</td> </tr> <tr> <td>Activity 16</td> </tr> <tr> <td>p. 187-192</td> </tr> </table> <div data-bbox="1367 643 1841 737" style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p>APPROACHING LEARNERS Have students watch the video segment Weather: Preparing a Severe Weather Kit and discuss ideas from the video. Also, give students a specific type of severe storm that they are familiar with to focus on. Have students list all of the dangers associated with that type of storm and list their basic needs to come up with a list of items for their bag.</p> </div> <div data-bbox="1367 764 1841 860" style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p>ADVANCED LEARNERS Have students create a basic bag that has different add-on bags for different types of storms. The basic bag would contain the items needed for every type of emergency (i.e., food and water) and each supplementary bag would have items for specific severe weather events (i.e., snowshoes for a blizzard, a parka for a rainstorm, etc.).</p> </div> <p>Digital: Activity 17 Enter Quick Code: ca3817s Note: Make sure <i>Teacher View On Approaching and Advance Learners</i></p> <p>Print:</p> <table border="1" data-bbox="1297 1097 1640 1203"> <tr> <td>TE Pages</td> </tr> <tr> <td>Activity 17</td> </tr> <tr> <td>p. 194-197</td> </tr> </table> <div data-bbox="1335 1248 1875 1398" style="border: 1px solid #ccc; padding: 5px; margin: 10px 0;"> <p>DIFFERENTIATION Because of cultural, linguistic, and economic differences, not all students may be familiar with the domain-specific words commonly used in science. As a result, some students will encounter difficulty, or show lack of confidence when reporting on their scientific explanations or engaging in scientific argument. Classroom instruction should be adapted to meet the needs of these students. Most importantly, students should be provided with a supportive learning environment that respects the discussion of their ideas.</p> </div>	TE Pages	Activity 16	p. 187-192	TE Pages	Activity 17	p. 194-197
TE Pages								
Activity 16								
p. 187-192								
TE Pages								
Activity 17								
p. 194-197								

Component	Strengths	Citations									
<p>TS4. Support for Students with Diverse Learning Needs.</p>	 <p>The screenshot shows two overlapping digital resources. On the left is a text passage titled 'Predicting Rain' with a blue background. It discusses how climate affects weather and how forecasters use historical data to predict future weather. On the right is a 'Science Glossary' window for the term 'climate'. It features a video player showing a forest scene and a definition: 'Climate is the average weather for long periods of time and in a specific region. The climate in a tropical rain forest is hot throughout the year. The climate in the tundra is bitterly cold during winters and cool during summers.'</p>	<p>Student Misconceptions Grade 3, Unit 4, Concept 4.2 Digital: Activity 12 Enter Quick Code: ca5016s Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 529 1640 634"> <tr> <td>TE Pages</td> </tr> <tr> <td>Activity 12</td> </tr> <tr> <td>p. 116-117</td> </tr> </table> <p>Interactive Worktext Tools Grade 3, Unit 4, Concept 4.1 Digital: Activity 11 Enter Quick Code: ca3769s</p> <p>Speak Text, Highlight, and Take Note example Enter Quick Code: ca3770s</p> <p>Print:</p> <table border="1" data-bbox="1297 984 1955 1187"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Glossary p. R21</td> <td>Glossary p. R19</td> </tr> <tr> <td>Vocabulary Flash Cards p. R9</td> <td>Vocabulary Flash Cards p. R7</td> </tr> </table>	TE Pages	Activity 12	p. 116-117	TE Pages	SE Pages	Glossary p. R21	Glossary p. R19	Vocabulary Flash Cards p. R9	Vocabulary Flash Cards p. R7
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Component	Strengths	Citations						
<p>TS4. Support for Students with Diverse Learning Needs.</p>	<p>Accommodate the differences in learners through student-centered instruction: Features such as high-quality graphics and videos, game play, virtual labs, and robust STEM challenges motivate students to think deeply about topics that are traditionally taught through direct instruction, encouraging student-centered instruction and supporting teachers as learning facilitators.</p> <p>Stress the collectivity of interactions as well as individuality: Throughout California Science Techbook, learning experiences are designed for student collaboration and individual exploration. Hands-On Activities, Talk Together and STEM Project Starters provide opportunities for students to work together, while technology enhanced items encourage individual accountability. California Science Techbook seamlessly incorporates Universal Design for Learning (UDL) principles, so students can access and create content and communicate their ideas using multiple means of representation.</p> <p>Expansive Content to Reach All Learners: The Beyond tab provides a variety of additional resources that can be used to differentiate by accelerating or remediating as needed. These related resources include the following: videos, Lexile-leveled reading passages, virtual labs, and editable Hands-on Activities/Labs.</p>	<p>Station-Based Activities Grade 3, Unit 4, Concept 4.1 Print:</p> <table border="1" data-bbox="1297 354 1640 459"> <tr> <td>TE Pages</td> </tr> <tr> <td>Activity 9-11 p. 50-58</td> </tr> </table>  <p>Peer Conversation Grade 3, Unit 4, Concept 4.1 Digital: Activity 4; Observe Like a Scientist; Global Climate Zone Enter Quick Code: ca3762s</p> <p>Print:</p> <table border="1" data-bbox="1260 1154 1858 1260"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 4 p. 33-34</td> <td>Activity 4 p. 15</td> </tr> </table>	TE Pages	Activity 9-11 p. 50-58	TE Pages	SE Pages	Activity 4 p. 33-34	Activity 4 p. 15
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Activity 4 p. 33-34	Activity 4 p. 15							

Component	Strengths	Citations			
<p>TS4. Support for Students with Diverse Learning Needs.</p>	<p>Discovery Education’s Experience resource, which is also part of the adoption package, provides a repository of K–12, cross-curricular resources that can be used to differentiate and enhance learning for all students in the science classroom.</p> <p>Assigning Features: Teachers can tailor instruction and meet the needs of all students by assigning appropriate content based on specific learning preferences or developmental needs. In California Science Techbook teachers can quickly assign and share instructional resources to individual students, groups of students, or the entire class.</p> <p>Using the Share feature, teachers can also use Google Classroom to assign Science Techbook activities and media to students.</p> <p>Modalities for Learning: Although many students prefer to consume content in a digital manner, often a print-based experience can be more effective in helping them solidify content knowledge. California Science Techbook provides flexibility for teachers to select the most appropriate mode of delivery of content for students.</p> <ul style="list-style-type: none"> • Print Student Edition: The student consumable worktext is available for all students, Grades K-8, in both English and authentic Spanish. • Print Accessibility: Within the toolbar in the digital Science Techbook, teachers can print a page or the entire concept with one click of a button. • Pathways for Learning: Suggestions on how to 	<p>Discovery Education Experience Digital: https://tinyurl.com/yxms7kjl</p> <p>Step by Step Guide for Assigning Content to Students: Digital: https://tinyurl.com/y7og28g6</p>  <p>Literacy and Pathways to Learning Grade 3, Unit 4, Concept 4.1 Digital: https://tinyurl.com/y9bacnfd Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 1075 1640 1180"> <tr> <td>TE Pages</td> </tr> <tr> <td>Activity 11</td> </tr> <tr> <td>p. 55-58</td> </tr> </table>	TE Pages	Activity 11	p. 55-58
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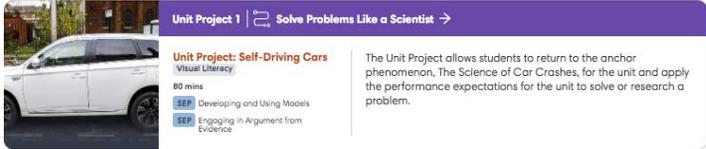
Component	Strengths	Citations
<p>TS4. Support for Students with Diverse Learning Needs.</p>	<p>utilize digital assets in a paper-based, blended, and fully digital classroom environment are provided for each concept in the print TE.</p> <p>Professional Learning: Teacher professional learning is bundled in the California Science Techbook program. The face-to-face and job-embedded professional learning sessions focus on getting started with and using the resources to meet the needs of all students through effective, differentiated instruction. These sessions also utilize the Spotlight on Strategies that are available in the Discovery Education Experience. These SOS are created by teachers, for teachers and now also include videos specifically for students on how they, too, can incorporate these strategies into their learning.</p>	<p>Professional Learning Center Digital: https://teachers.discoveryeducation.com/</p> <p>Discovery Education Network (DEN)</p>  <p>Digital: http://bit.ly/2PtnYVN</p>

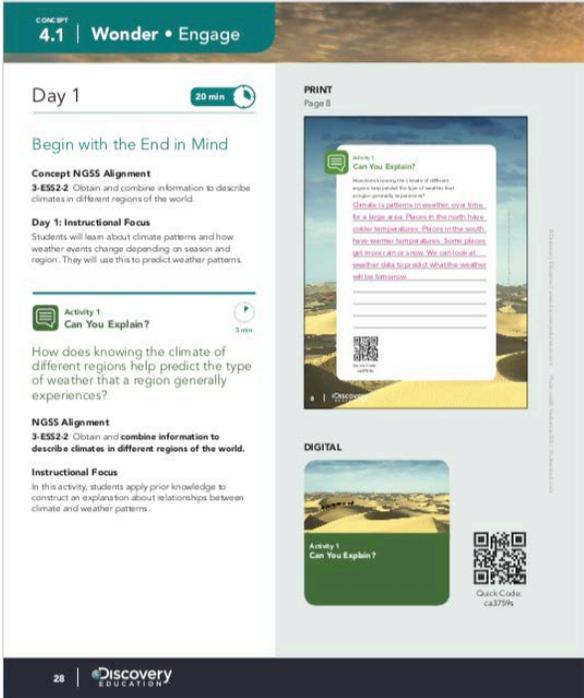
Component	Strengths	Citations
<p>TS5. Support to Monitor Student Progress.</p>	<p>Materials provide support for teachers to monitor student learning and progress over time, make decisions about instruction, and provide feedback to students.</p> <p>Teachers can easily monitor student progress in California Science Techbook through different modalities of instruction, such as Hands-on Investigations, Interactives and Technology Enhanced Items embedded within the Wonder, Learn, Share (5-E) learning cycle at point of use. Teachers can easily view the formative assessment opportunities in each concept by reviewing the Concept at a Glance information in the print Teacher Edition.</p> <p>Summative Unit level Assessments can be located in the digital program under the Unit Resources tab. These assessments are CAST-like in that they mirror the state assessment in format, task type and content, including questions that utilize at a minimum 2 of the 3 dimensions. The assessments items are launched through an engaging real-world application and require students to apply new content understanding. Teachers can access course level assessment results from the Results Navigation bar on the right side.</p> 	<p>Concept at a Glance Grade 3, Unit 4, Concept 4.1</p> <p>Digital: https://tinyurl.com/ydd98h9o Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <div data-bbox="1297 521 1640 630" style="border: 1px solid black; padding: 5px;"> <p>TE Pages Concept 1 p. 22-23</p> </div>  <p>Summative Unit Assessment Grade 3, Unit 4 Digital: Enter Quick Code: ca3821s</p> <p>Print:</p> <div data-bbox="1297 1175 1640 1317" style="border: 1px solid black; padding: 5px;"> <p>TE Pages Performance-Based Assessment p. 208</p> </div> <p>Teacher's Guide: https://tinyurl.com/y82mld3o</p>

Component	Strengths	Citations
<p>TS5. Support to Monitor Student Progress.</p>	<p>Dashboard: Teachers are equipped with a Dashboard on the right-hand side of the screen that shows all student answers to responses from the Technology Enhanced Items (TEIs) embedded in the Interactive Student Worktext.</p> <p>Throughout the learning progression, each tab of each concept includes Technology Enhanced Items that have students connect to what they already know about the topic (Wonder), and then as they progress, to monitor what they do learn as they explore and learn through a variety of multimodal resources (Wonder, Learn, Share). Students receive feedback on their knowledge, and the teacher has real-time access to this data in the Dashboard. This real-time data allows teachers to remediate and differentiate as needed in order to help students develop metacognitive abilities.</p> <p>Based on this real-time data, teachers can then make decisions about the needs of each student and select an appropriate instructional resource within the concept to meet the students' needs. Discovery Education Experience resources deepen the pool of assets that can be assigned to students.</p> <p>In addition to the full Dashboard, teachers have a Results View for all individual Technology Enhanced items at point of use as well.</p> <p>Builder Tools: Assessment Builder and Studio give teachers flexibility to create customized assessments.</p>	<p>Video of Dashboard functionality: https://tinyurl.com/y4chmhbz</p> <p>Step by Step Guide to Assessment Builder: https://tinyurl.com/y5r2465g</p> <p>Step by Step Guide to Studio: https://tinyurl.com/y8rt7us2</p>

Designed for CA NGSS: Student Work

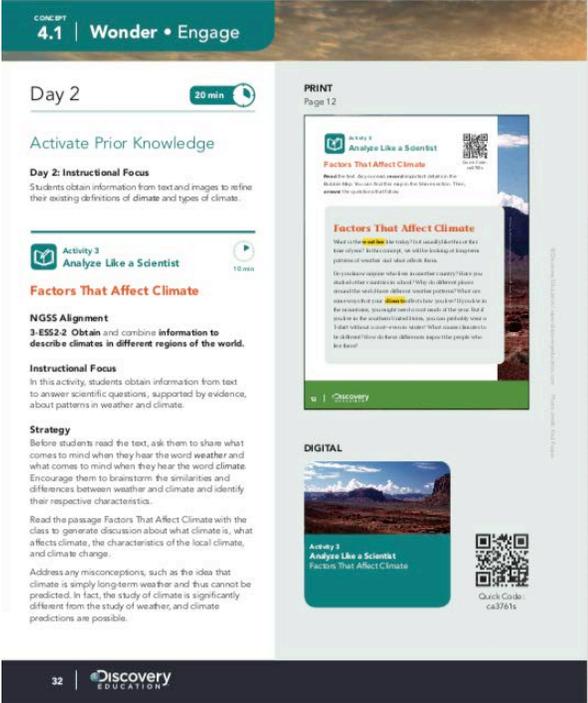
Component	Strengths	Citations								
<p>SW1. Quality of opportunities to explain phenomena/ solve problems.</p>	<p>Materials provide anchoring and investigative phenomena/problems that:</p> <ul style="list-style-type: none"> engage students as directly as possible in authentic and relevant experiences. are matched to targeted learning goals. can be figured out/solved using scientifically accurate understandings and abilities. make connections beyond and to their daily lives including to their homes, neighborhoods, communities, local environment, and/or cultures. <p>Phenomena/Problems The Unit Pages provide students direct access to the real world, relevant, Anchor Phenomena for the unit, as well as Investigative Phenomena for each concept found in the unit. The Unit pages are available both in print and digital. Students are engaged in real-world, often local and relatable phenomena using video, imagery, hands-on experiences, and other modalities.</p> <p>As students move through the learning progression, the Anchor Phenomenon is connected to concept Investigative Phenomena, which will drive student explorations using the SEPs through the lens of the CCCs and wrap up with a real-world, relevant STEM Unit Project directly related to the anchor phenomenon. Students are encouraged to write their own questions, but phenomena are also paired with guided questions for scaffolding when appropriate.</p>	<p>Grade 3: Unit 4: Weather Impacts Unit Page: Anchor Phenomenon Print:</p> <table border="1" data-bbox="1402 500 1927 669"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Anchor Phenomenon Launch p. 16</td> <td>Anchor Phenomenon: p. 2-3</td> </tr> </tbody> </table> <p>Digital: Enter Quick Code: ca3755s</p> <p>Investigative Phenomenon Grade 3, Unit 4, Concept 4.1 Print:</p> <table border="1" data-bbox="1354 906 1864 1010"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 2 p. 30-31</td> <td>Activity 2 p. 10-11</td> </tr> </tbody> </table> <p>Digital: Enter Quick Code: ca3760s</p>	TE Pages	SE Pages	Anchor Phenomenon Launch p. 16	Anchor Phenomenon: p. 2-3	TE Pages	SE Pages	Activity 2 p. 30-31	Activity 2 p. 10-11
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Anchor Phenomenon Launch p. 16	Anchor Phenomenon: p. 2-3									
TE Pages	SE Pages									
Activity 2 p. 30-31	Activity 2 p. 10-11									

Component	Strengths	Citations							
<p>SW1. Quality of opportunities to explain phenomena/ solve problems.</p>	<p>These questions serve as the purpose for learning in the concept and the prompt for students to construct a formal scientific explanation in Share/Explain using scientifically accurate evidence from the activities in Learn/Explore.</p> <p>The Phenomena and the STEM Unit Projects feature real world engaging connections to student’s daily lives, homes and communities and/or culture. Examples of these projects range from noticing water evaporating in a fish bowl to designing a water filtration device to reduce water pollution.</p> <p>At the end of each Unit is a performance- based Unit Assessment, found in the Unit Resource tab in the digital program. These CAST-like assessments are rooted in real world, local or relatable anchor phenomena. Students are asked to apply understanding and three-dimensional learning to complete the task items.</p>	<p>Unit Project Grade 3, Unit 4 Print:</p> <table border="1" data-bbox="1354 430 1866 600"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Unit Project: Mudslides and Floods p. 204-207</td> <td>Unit Project: Mudslides and Floods p. 156-161</td> </tr> </tbody> </table> <p>Digital: Enter Quick Code: ca3820s</p>  <p>Performance-Based Unit Assessment Grade 3, Unit 4 Digital: Enter Quick Code: ca3821s</p> <p>Print:</p> <table border="1" data-bbox="1297 1117 1640 1256"> <tbody> <tr> <td>TE Pages</td> </tr> <tr> <td>Performance-Based Assessment</td> </tr> <tr> <td>p. 208</td> </tr> </tbody> </table> <p>Teacher’s Guide: https://tinyurl.com/y82mld3o</p>	TE Pages	SE Pages	Unit Project: Mudslides and Floods p. 204-207	Unit Project: Mudslides and Floods p. 156-161	TE Pages	Performance-Based Assessment	p. 208
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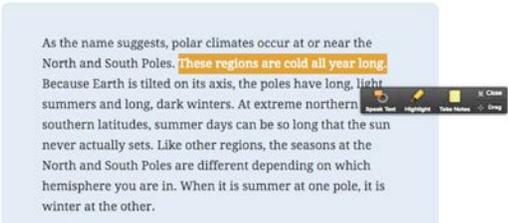
Component	Strengths	Citations				
<p>SW2. Quality of building a three-dimensional conceptual framework.</p>	<p>Materials include learning experiences that help students build scientifically accurate understandings and abilities through opportunities for students to:</p> <ul style="list-style-type: none"> • Link prior knowledge negotiated new understanding and abilities. • Do work that approximates the nature of science • Use reasoning to connect grade appropriate SEP, DCI, and CCC elements and EP&C's (when applicable). • Ask and answer questions that link learning over time • Negotiate new understandings and abilities by comparing their ideas, their peers' ideas, and ideas encountered in the learning experience(s). • Apply their understandings and abilities in a variety of ways <p>Wonder/Engage: In California Science Techbook, the Wonder (Engage) section provides phenomena-driven or problem-based learning experiences as catalysts for the inquiry process, triggering students' natural sense of curiosity and wonder.</p> <p>Students are challenged to describe real-world phenomena and to develop questions around these phenomena through Can You Explain? questions. Technology Enhanced Items (TEIs) help students show what they already know about a concept, including their preconceptions and misconceptions.</p>	<p>Wonder: Can You Explain Grade 3, Unit 4, Concept 4.1 Digital: Enter Quick Code: ca3759s</p> <p>Print:</p> <table border="1" data-bbox="1354 542 1869 678"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 1- Can You Explain p. 28-29</td> <td>Activity 1- Can You Explain p. 8-9</td> </tr> </table> 	TE Pages	SE Pages	Activity 1- Can You Explain p. 28-29	Activity 1- Can You Explain p. 8-9
TE Pages	SE Pages					
Activity 1- Can You Explain p. 28-29	Activity 1- Can You Explain p. 8-9					

Component	Strengths	Citations								
<p>SW2. Quality of building a three-dimensional conceptual framework.</p>	<p>Learn/Explore: Providing the majority of the robust scientific content, the Learn (Explore) section features text and resources that help students test predictions, collect evidence, and record observations and ideas. Learn also contains engaging Interactives and Hands-On Activities that check for understanding and provides opportunities for students to apply what they have learned.</p>	<p>Learn: Hands-On Investigation and Online Interactive Hands-On Investigation Grade 3, Unit 4, Concept 4.2 Digital: Activity 6; Investigate Like a Scientist; Hands-On Investigation: Weather Data Enter Quick Code: ca3783s</p> <p>Print:</p> <table border="1" data-bbox="1257 625 1858 727"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 6 p. 97-105</td> <td>Activity 6 p. 65-71</td> </tr> </table> <p>Online Interactive Grade 3, Unit 4, Concept 4.1 Digital: Activity 6; Observe Like a Scientist; Exploring Regional Climates Enter Quick Code: ca3764s</p> <p>Teacher’s Guide: https://tinyurl.com/y95j5ju6</p> <p>Print:</p> <table border="1" data-bbox="1257 1128 1858 1230"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Activity 6 p. 41-43</td> <td>Activity 6 p. 20-21</td> </tr> </table> <p>Beyond tab – Additional Interactives and Resources Digital: https://tinyurl.com/yaeotyzt</p>	TE Pages	SE Pages	Activity 6 p. 97-105	Activity 6 p. 65-71	TE Pages	SE Pages	Activity 6 p. 41-43	Activity 6 p. 20-21
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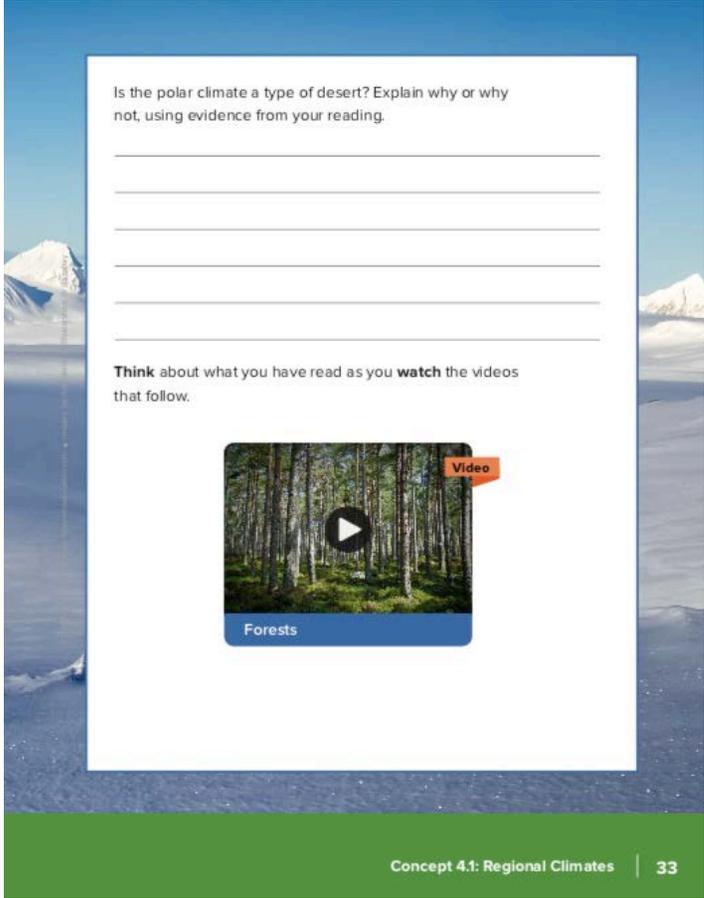
Component	Strengths	Citations																																														
<p>SW2. Quality of building a three-dimensional conceptual framework.</p>	<p>Share/Explain:</p> <ul style="list-style-type: none"> This section encourages students to verbalize and demonstrate their conceptual understanding, new skills, and behaviors by constructing a scientific explanation related to the Can You Explain? question first posed in Wonder. <p>Share/Elaborate and Evaluate: By presenting opportunities for critical thinking, exploration, and summative assessments, the Share (Elaborate) section connects STEM skills to real-world problems. Share with STEM is divided into two sections: STEM in Action and STEM Project Starters. Please note that STEM Connect is also part of the Discovery Education Comprehensive Science Program. STEM Connect includes real-world projects through a Challenge, Design, and Solve model of problem-solving.</p> <p>Activity Types There are various activity types, found within the model of Wonder/Learn/Share. These activities help students recognize opportunities to apply specific SEPs with DCI and CCC for three-dimensional learning.</p> <table border="1" data-bbox="659 1110 974 1401"> <caption>Activity Types in Wonder, Learn, and Share</caption> <thead> <tr> <th>Icon</th> <th>Student Edition Label</th> <th>Activity Description</th> </tr> </thead> <tbody> <tr> <td></td> <td>Can You Explain?</td> <td>Students communicate prior knowledge to frame their learning.</td> </tr> <tr> <td></td> <td>Ask Questions Like a Scientist</td> <td>Students begin to ask questions about the investigative phenomenon.</td> </tr> <tr> <td></td> <td>Observe Like a Scientist</td> <td>Students make observations and connections across science class.</td> </tr> <tr> <td></td> <td>Analyze Like a Scientist</td> <td>Students analyze and evaluate text to draw scientific explanations.</td> </tr> <tr> <td></td> <td>Investigate Like a Scientist</td> <td>Students conduct investigations, collect data, and reflect on their own learning.</td> </tr> <tr> <td></td> <td>Evaluate Like a Scientist</td> <td>Students demonstrate multidimensional learning by interpreting data, text, and images.</td> </tr> <tr> <td></td> <td>Interpret Data Like a Scientist</td> <td>Students analyze graphical and numeric data.</td> </tr> <tr> <td></td> <td>Solve Problems Like a Scientist</td> <td>Students apply scientific ideas to solve problems.</td> </tr> <tr> <td></td> <td>Design Solutions Like a Scientist</td> <td>Students design solutions to real-world problems.</td> </tr> <tr> <td></td> <td>Record Evidence Like a Scientist</td> <td>Students use evidence to construct scientific explanations of the investigative phenomenon.</td> </tr> <tr> <td></td> <td>Think Like a Scientist</td> <td>Students deepen core scientific ideas through reasoning activities.</td> </tr> </tbody> </table>	Icon	Student Edition Label	Activity Description		Can You Explain?	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Think Like a Scientist	Students deepen core scientific ideas through reasoning activities.	<p>Share: Record Evidence Grade 3, Unit 4, Concept 4.1 Digital: Enter Quick Code: ca3777s Print:</p> <table border="1" data-bbox="1260 464 1864 568"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 14, Droughts p. 64-68</td> <td>Activity 14, Droughts p. 42-46</td> </tr> </tbody> </table> <p>Share: STEM Project STEM in Action Grade 3, Unit 4, Concept 4.1 Digital: Activity 15; Analyze Like a Scientist; Climatologist Enter Quick Code: ca3773s Print:</p> <table border="1" data-bbox="1260 878 1864 982"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 15 p. 70-71</td> <td>Activity 15 p. 47-49</td> </tr> </tbody> </table> <p>STEM Project Starter Grade 3, Unit 4, Concept 4:1 Digital: Extension 2; Design a Dog House https://tinyurl.com/yclo635m</p> <p>Activity Types Grade 3 Print:</p> <table border="1" data-bbox="1297 1284 1640 1388"> <thead> <tr> <th>TE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity Types p. xxix</td> </tr> </tbody> </table>	TE Pages	SE Pages	Activity 14, Droughts p. 64-68	Activity 14, Droughts p. 42-46	TE Pages	SE Pages	Activity 15 p. 70-71	Activity 15 p. 47-49	TE Pages	Activity Types p. xxix
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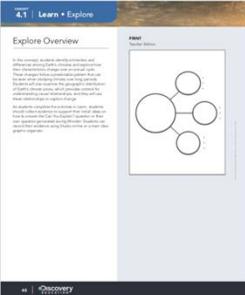
Component	Strengths	Citations				
<p>SW3. Quality of leveraging student prior knowledge and experiences.</p>	<p>Materials leverage students’ prior knowledge and experiences to motivate student learning in ways that:</p> <ul style="list-style-type: none"> • make visible students’ prior knowledge and experiences related to the anchoring and investigative phenomena/ problems and relevant SEPs, DCIs, and CCCs and EP&Cs (when applicable). • revisit students’ early ideas to see how they have changed (or not) as they figure out phenomena/solve problems. • make explicit links to new ideas and practices being developed by students. <p>The Wonder (Engage) section of each concept includes Technology Enhanced Items that have students identify what they already know about the topic. They receive feedback on their current knowledge, and the teacher has real-time access to this data in the Dashboard. Each concept also includes initial thoughts and ideas that might support the guiding question; this will appear at the bottom of the Wonder (Engage) page in the digital Techbook where it says “Can You Explain?”</p> <p>Students use resources such as hands-on activities, images, songs, interactives, glossary animations, reading passages, and the Core Interactive Text to answer “Can You Explain” questions. They will keep track of their evidence using both print and digital supports in crafting their scientific explanations in each concept and can revisit their answer in their personal dashboard.</p>	<p>Wonder: Activate Prior Knowledge Grade 3, Unit 4, Concept 4.2</p> <p>Digital: Enter Quick Code: ca3761s</p> <p>Print:</p> <table border="1" data-bbox="1354 500 1866 670"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 3- Analyze Like a Scientist p. 32-33</td> <td>Activity 3- Analyze Like a Scientist p. 12-14</td> </tr> </tbody> </table> 	TE Pages	SE Pages	Activity 3- Analyze Like a Scientist p. 32-33	Activity 3- Analyze Like a Scientist p. 12-14
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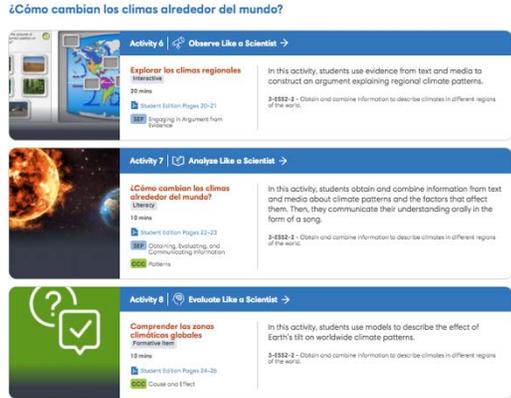
Component	Strengths	Citations				
<p>SW4. Quality of providing experiences that develop metacognition.</p>	<p>Materials include learning experiences for students to:</p> <ul style="list-style-type: none"> • Set and monitor their learning in light of the targeted learning goals • Consider, overtime, what and how they have learned across the three dimensions • Articulate how the three dimensions helped them figure out anchor and investigative phenomena/solve problems <p>Monitoring Student Progress & Metacognition Teachers are equipped with a Dashboard on the right-hand side of the screen that shows all student answers to responses from the Technology Enhanced Items (TEIs) embedded in the Student Interactive Worktext. Throughout the learning progression, each tab of each concept includes Technology Enhanced Items that have students connect to what they already know about the topic (Wonder), and then as they progress, to monitor what they do learn as they explore and learn through a variety of multimodal resources (Wonder, Learn, Share). They receive feedback on their knowledge, and the teacher has real-time access to this data in the Dashboard. This real-time data allows teachers to remediate and differentiate as needed in order to help students develop metacognitive abilities.</p>	<p>Concept Level Student Objectives Grade 3, Unit 4, Concept 4.1</p> <p>Digital: Enter Quick Code: ca3758s</p> <p>Print:</p> <table border="1" data-bbox="1352 532 1866 670"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Concept Objectives p. 20</td> <td>Student Objectives p. 7</td> </tr> </table> 	TE Pages	SE Pages	Concept Objectives p. 20	Student Objectives p. 7
TE Pages	SE Pages					
Concept Objectives p. 20	Student Objectives p. 7					

Component	Strengths	Citations
<p>SW4. Quality of providing experiences that develop metacognition.</p>	<p>Each Concept includes initial thoughts and ideas that might support the guiding question; this will appear at the bottom of the Wonder (Engage) page in the digital program, “Can You Explain?”. Students are encouraged to think about what they know, how they know it and what they would like to learn more about. They do this by applying their learning across the three dimensions and revisit this learning at the end of the Concept. Their new learning is then linked to confirming or modifying their initial understanding of Anchor Phenomena from the Unit launch.</p> <p>Students use resources such as hands-on activities, images, songs, interactives, glossary animations, reading passages, and the Core Interactive Text to answer “Can You Explain” questions. They will keep track of their evidence using both print and digital supports in crafting their scientific explanations in each concept and can revisit their answer in their personal dashboard.</p> <p>Tools for All Types of Learners: Students can annotate text using highlighting and notes. These annotations remain at point of use for students and are automatically populated in a Notebook that students can use for reflections and for reviewing their learning. Studio is an excellent tool that also provides an opportunity for students to demonstrate learning and revisit as they move through learning progression. Templates are provided related to constructing explanations and carrying out investigations.</p>	<p>Video of Dashboard functionality: https://tinyurl.com/y4chmhbz</p>  <p>Interactive Worktext Tools Grade 3, Unit 4, Concept 4.1 Digital: Activity 11 Enter Quick Code: ca3769s</p> <p>Speak Text, Highlight, and Take Note example</p> <p>Climate Research</p> <p>Explore more about the climates in three different regions of the world. Read the text, watch the videos, and answer the questions. Then, choose one of the regions and do more research on it.</p>  <p>Step by Step Guide to Studio: https://tinyurl.com/y8rt7us2</p>

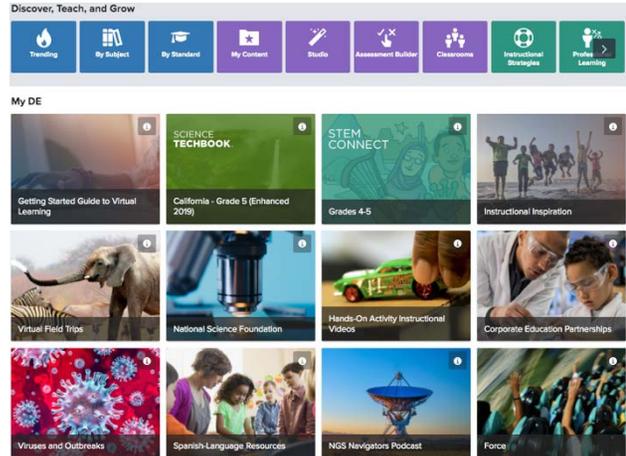
Component	Strengths	Citations				
<p>SW5. Quality of providing equitable learning opportunities.</p>	<p>Materials ensure that all students, including those from nondominant groups and with diverse learning needs, have access to the targeted learning goals and experiences, including:</p> <ul style="list-style-type: none"> • appropriate reading, writing, listening, and/or speaking alternatives for students who are English language learners, have special needs, read below the grade level, or have high interest and have already met the intended learning goals. • culturally relevant contexts and examples that support all students. • opportunities to cultivate interest and confidence as scientists and engineers for all students. <p>California Science Techbook Program offers access to best-in-class content that meets instructional goals, inspires student engagement, and reflects the diversity of the students served. With California Science Techbook all students have full access to a robust science curriculum.</p> <p>Reading Comprehension Students interact with text, produce text, participate in discussions, and engage in research for the primary purpose of building their reading comprehension skills. Discovery Education’s digital resources were expertly crafted with tools and opportunities to support all types of learners to make meaning of informational text. Multiple forms of representation, including language alternatives; dual reading levels; and the</p>	<p>Reading Comprehension Grade 3, Unit 4, Concept 4.1 Digital: Enter Quick Code: ca3769s</p> <p>Print:</p> <table border="1" data-bbox="1354 544 1869 714"> <thead> <tr> <th>TE Pages</th> <th>SE Pages</th> </tr> </thead> <tbody> <tr> <td>Activity 11- Analyze Like a Scientist p. 55-58</td> <td>Activity 11- Analyze Like a Scientist p. 32-37</td> </tr> </tbody> </table> <p>Reading Passage – Student Edition</p> 	TE Pages	SE Pages	Activity 11- Analyze Like a Scientist p. 55-58	Activity 11- Analyze Like a Scientist p. 32-37
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Component	Strengths	Citations
<p>SW5. Quality of providing equitable learning opportunities.</p>	<p>alternatives; dual reading levels; and the complementary use of images, videos, and audio, build students' background knowledge and strengthen their comprehension.</p>	

Component	Strengths	Citations				
<p>SW5. Quality of providing equitable learning opportunities.</p>	<p>California Science Techbook provides a wide array of graphic organizers and visual supports offering non-linguistic opportunities to process content. Hands-on Activities and Investigations provide support for interacting with science concepts making learning visual. Additional, Hands-on Labs and non-fiction Reading Passages are found in the Beyond tab of each Concept providing related content for building students' scientific understanding and development. The Reading Passages on a concept are written at different Lexiles. These passages offer different text structures such as problem-solution, cause and effect, and compare and contracts. Students not only learn to read these types of texts, but they are also used as mentor texts for writing.</p>  <p>Literacy Connections Strategies Literacy Connections Cards are integrated into the digital Techbook to save teachers time and create seamless opportunities to bring literacy into science and science into literacy. These cards, aligned to the Wonders and Benchmark reading programs, provide teachers with resources to make their reading and writing instructional multimodal, and integrate the reading and writing skills and strategies from their literacy curriculum into the science curriculum.</p>	<p>Graphic Organizers Grade 3, Unit 4, Concept 4.1 Print:</p> <table border="1" data-bbox="1354 370 1680 475"> <tr> <td>TE Pages</td> </tr> <tr> <td>Explore Overview p. 40</td> </tr> </table> <p>Grade 3 Resources – Graphic Organizers Print:</p> <table border="1" data-bbox="1354 675 1692 781"> <tr> <td>TE Pages</td> </tr> <tr> <td>Graphic Organizers p. R1-R6</td> </tr> </table> <p>Beyond tab – Additional Interactives and Resources Grade 3, Unit 4, Concept 4.1 Digital: https://tinyurl.com/yaeotyzt</p> <p>Literacy Connection Strategies Grade 3, Unit 4, Concept 4.1 Digital:</p> <ul style="list-style-type: none"> • Benchmark: https://tinyurl.com/y8e9j2va • Wonders: https://tinyurl.com/ybye7u6o 	TE Pages	Explore Overview p. 40	TE Pages	Graphic Organizers p. R1-R6
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Graphic Organizers p. R1-R6						

Component	Strengths	Citations
<p>SW5. Quality of providing equitable learning opportunities.</p>	<p>Multilingual Support Video, audio, and print text resources are available in a number of languages. Digital search filters help teachers and students identify resources in other languages. Additionally, the program is available digitally and in print in both English and authentically translated Spanish to support dual immersion programs.</p> <p>To support students in other languages, digital pages in Science Techbook can be translated into any language available in Google Translate.</p> <p>English Language Development California Science Techbook provides access to rich content and academic language in science. Throughout California Science Techbook ELA/ELD Standards and the California NGSS work in tandem to support the English learners. In California Science Techbook students build knowledge about science in variety of different ways, teachers are provided with point of use suggestions for meeting the needs of English Learner students with various levels of language acquisition including, Emerging, Expanding and Bridging. In addition, to the point of use lesson suggestions, tools and supports are embedded within the digital and print components to scaffold and support language and content.</p> <p>California Science Techbook supports the breadth and depth of students' vocabulary acquisition through multiple representations. Students will see new academic language highlighted in context of the student edition in both the print and digital program. In the digital offering students can click on the word and several</p>	<p>Spanish Version Grade 3, Unit 4, Concept 4.1 Digital: https://tinyurl.com/y7uo8klf</p> <p>Para ayudarte a responder tus propias preguntas o la pregunta ¿Puedes explicarlo?, completa las actividades en Learn. Pensarás y actuarás como un científico para descubrir evidencia para tu explicación científica.</p>  <p>Technology Enhanced Item translated into simplified Chinese using Google Translate.</p>  <p>Example- Science Techbook Video in Spanish Grade 1, Unit 3, Concept 3.2, Activity 5: Shadow Play Digital: https://tinyurl.com/ycln7yq3</p>

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<p>SW5. Quality of providing equitable learning opportunities.</p>	<p>additional contextual supports are provided such as seeing the word in context of a sentence, viewing an image and/or video and a traditional definition.</p>	<p>Discovery Education Experience- Additional Videos in Spanish Digital: https://tinyurl.com/ybgzfl57</p> <p>English Language Development Support Grade 3, Unit 4, Concept 4.1 Digital: Activity 7 Enter Quick Code: ca3765s Note: Make sure <i>Teacher View On</i></p> <p>Print:</p> <table border="1" data-bbox="1297 696 1640 836"> <tr> <td>TE Pages</td> </tr> <tr> <td>ELD Support Activity 7 p. 46</td> </tr> </table> <p>Interactive Glossary, Print Glossary and Flashcards Grade 3, Unit 4, Concept 4.1 Digital: Activity 12 Enter Quick Code: ca3770s</p> <p>Print:</p> <table border="1" data-bbox="1297 1117 1955 1323"> <tr> <td>TE Pages</td> <td>SE Pages</td> </tr> <tr> <td>Glossary p. R21</td> <td>Glossary p. R19</td> </tr> <tr> <td>Vocabulary Flash Cards p. R9</td> <td>Vocabulary Flash Cards p. R7</td> </tr> </table>	TE Pages	ELD Support Activity 7 p. 46	TE Pages	SE Pages	Glossary p. R21	Glossary p. R19	Vocabulary Flash Cards p. R9	Vocabulary Flash Cards p. R7
TE Pages										
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<p>SW5. Quality of providing equitable learning opportunities.</p>	<p>Discovery Education Experience Saving the best for last, in addition to California Science Techbook, all students and teachers will have access to the Discovery Education Experience (formerly known as Streaming) and STEM Connect. Both programs provide access to rich content to extend and deepen students understanding.</p> <p>Through the Discovery Education Experience students have access to over 200,000 media assets to go as deep and wide as preferred. This includes:</p> <ul style="list-style-type: none"> • appropriate reading, writing, listening, and/or speaking alternatives for students who are English language learners, have special needs, read below the grade level, or have high interest and have already met the intended learning goals; • culturally relevant contexts and examples that support all students; and, • opportunities to cultivate interest and confidence as scientists and engineers for all students. 	<p>Discovery Education Experience Digital: https://tinyurl.com/yxms7kjl</p> <ul style="list-style-type: none"> • Check out the Instructional Inspiration Channel which includes ready to go, assignable Studio boards. • Check out real world science with the MLB in The Science of Baseball Channel. • Take your students to the Tundra to see the real world of Polar Bears through a Virtual Field Trip.  <p>The screenshot shows the Discovery Education Experience user interface. At the top, there is a navigation bar with tabs: Trending, By Subject, By Standard, My Content, Studio, Assessment Builder, Classrooms, Instructional Strategies, and Probes Learning. Below this is a 'My DE' section with a grid of content tiles. The tiles include: Getting Started Guide to Virtual Learning, SCIENCE TECHBOOK (California - Grade 5 (Enhanced 2019)), STEM CONNECT (Grades 4-5), Instructional Inspiration, Virtual Field Trips, National Science Foundation, Hands-On Activity Instructional Videos, Corporate Education Partnerships, Viruses and Outbreaks, Spanish-Language Resources, NGSS Navigators Podcast, and Force.</p>