

California Elevate Science © 2020 Grades K–5 Program Overview

Home



Hi, I'm Tracy, and I'll be your learning partner for this tutorial. If you're anything like me, getting a new science curriculum can feel exciting but also a little overwhelming!

In this tutorial, we'll go through the basics of teaching with *California Elevate Science*. Scared of heights? We've got you covered.

Let's dig into some topics that will help you as you get started with the program. If there's one word I can use to describe the program, it's phenomena. As you browse the topics, be on the lookout for how phenomena are woven into the program's structure.

Program Materials

The collage displays the following components:

- Student Edition:** A book cover featuring a scenic view of a river flowing through a forested valley with mountains in the background.
- Teacher Edition:** A book cover similar to the Student Edition, but with a green vertical bar on the right side that reads "CALIFORNIA TEACHER EDITION" and the "elevate science" logo at the bottom.
- Leveled Readers:** Three small book covers titled "All About Parents and Offspring" with illustrations of sea turtles. A callout bubble says "ELD SUPPORT INSIDE!". Below the covers are the labels "Below", "On", and "Above".
- Materials Kits:** A box containing various science materials. Text on the box includes:
 - CLASSROOM MATERIALS KITS:** Organized equipment kits provide the materials to support all of the program labs.
 - ENGINEER IT! MAKER CRATES:** Encourage creative building and making. These crates contain materials to support and extend the Engineering It! Labs.
 - littleBits:** littleBits EXTENSION KITS

You've received a package of books and materials along with a digital subscription to Savvas Realize™. So now what?

Let's take a quick peek at both the print and digital versions of the program components to see how they will help you plan and teach your science lessons.

Student Edition

Demonstrate Lab
How can you identify minerals?

When geologists need to identify unknown mineral samples, they compare the properties of the sample to the known properties of minerals. How can you identify mineral samples?

Materials

- mineral samples
- hand lens
- streak plate
- nail
- penny

Procedure

1. Study the table of known mineral properties.

| Mineral | Color | Luster |
|----------------|--------------------------|---------------|
| Calcite | white-clear | glassy |
| Fluorite | varied | glassy |
| Hornblende | dark green to black | dull/glassy |
| Mica (biotite) | red, green, brown, black | pearly/glassy |
| Pyrite | gold | metallic |
| Streak quartz | pink | glassy |

2. Make a plan to identify the six minerals to help you test for each property.
3. Show your plan to your teacher before you begin.

4. Conduct your tests. Record your observations.

| Sample | Color | Luster | Streak | Hardness | Fracture of Minerals |
|-----------|-------|--------|--------|----------|----------------------|
| Mineral A | | | | | |
| Mineral B | | | | | |
| Mineral C | | | | | |
| Mineral D | | | | | |
| Mineral E | | | | | |
| Mineral F | | | | | |

Analyze and Interpret Data

5. **Evaluate** How does knowing the properties of minerals help you identify unknown samples?
6. **Reflect** How could you test changes to minerals?

Visual Literacy Connection
How can you see the same place in different ways?

These maps are all maps of San Francisco. Each map shows different information. Look at each map and see what information it includes.

Street Map Use a marker to trace the most direct route to go from Daly City to the bridge that crosses the San Francisco Bay.

Topographic Map This map shows the land surface of San Francisco using contour lines. Contour lines that are closer together show steeper land. Contour lines farther apart show flatter land. Circle one of the highest points in San Francisco. In San Francisco, the sea level is 0 feet. How do you know?

Local Attractions Map What types of attractions are there to see in San Francisco?

Student Edition

- Reading selections
- Activities
- Lab sheets
- Assessments

The Student Edition contains reading selections, activities, lab sheets, assessments, and more.

Teacher Edition

The screenshot displays the Realize Reader interface. On the left, a dark sidebar lists features: "Hear the text", "Digital notebook", "Downloadable docs", and "Annotation". The main content area shows a page titled "Structures and Functions" with a coyote image. A "The Essential Question" box asks, "How do plant and animal structures support growth and survival?". Below it, a "Show What You Know" section asks, "How do the ears of this California coyote give it a survival advantage over other animals with smaller ears?". A digital notebook is open on the right, showing a blank page with a toolbar and a "Close" button. A "Back" button is visible in the bottom right corner of the interface.

Your print Teacher Edition mirrors the Student Edition but also contains additional front and end matter and embedded supports on each page.

Both you and your students also have Realize Reader eTexts that you can use online.

Why use the student eText? First of all, students will love the option to hear the text. But my favorite feature is the digital notebook for Grades 1-5 where students type answers to questions that you can view and grade. I just love eliminating all those stacks of paper and having organized records for parent meetings!

Students can also complete interactivities on Savvas Realize that aren't available in print, like videos, virtual labs, and modeling activities.

Leveled Readers

Leveled Readers

- Below level
- On level
- Above level
- STEM Engineering



In addition to the primary textbooks, you've got print and digital versions of Leveled Readers and STEM Engineering readers that correspond to each topic—perfect for differentiating! The digital books offer audio read-aloud and annotation features, and you'll love the detailed lesson plans.

Materials Kits

Topic 1

Earth's Water

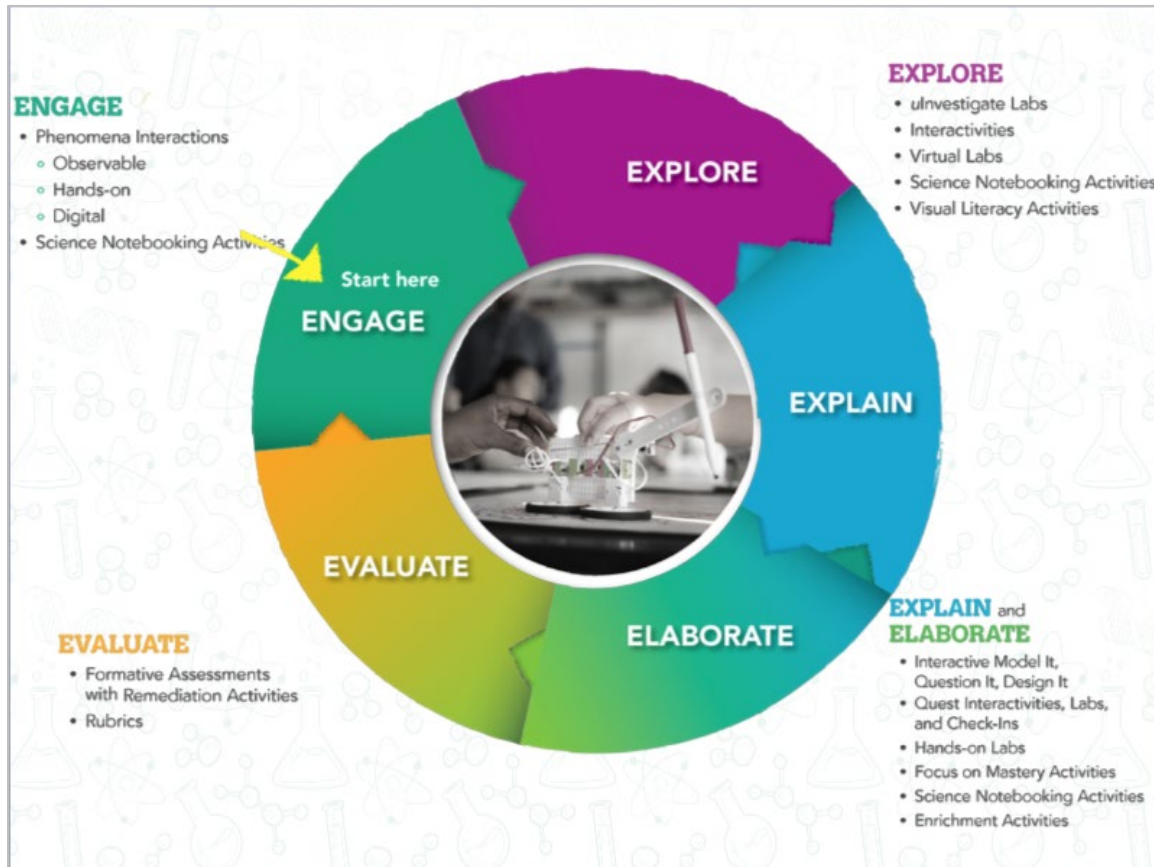
Topic Lab Materials List

| Consumable | Nonconsumable |
|--|---|
| <ul style="list-style-type: none"> Land and Water Sheet Drawing materials Newsprint River and Street Sheet Arial and Street Map Sheet Street Map Sheet | <ul style="list-style-type: none"> Green crayons Blue crayons Blue counting cubes Green counting cubes Modeling clay Centimeter rulers Meter sticks Drawing tools |

| | |
|--|---|
| <ul style="list-style-type: none"> Land and Water Sheet Drawing materials Newsprint River and Street Sheet Arial and Street Map Sheet Street Map Sheet | <ul style="list-style-type: none"> Green crayons Blue crayons Blue counting cubes Green counting cubes Modeling clay Centimeter rulers Meter sticks Drawing tools |
|--|---|

You may have also received materials that you can use during hands-on activities and labs. Didn't receive any materials kits? Fortunately, most of the materials are common items that you can gather. Find a list of these items at the beginning of each topic in the Teacher Edition. Or use the virtual labs instead!

Typical Lesson



Whoa, back up there! Before we look at the lesson detail, let's zoom out a little. First and foremost, make sure you've started with the California Spotlight and Quest Kickoff before teaching the lessons in each topic. These two features will help students make connections to the content they're about to learn. Make sure to visit those sections in this tutorial before you leave!

Now, you asked about a lesson, so let's dig in!

Each lesson follows the 5E structure—Engage, Explore, Explain, Elaborate, and Evaluate. These terms describe what students will do in each lesson phase. For example, each lesson contains a *Investigate Lab* in the Explore phase. Students will use what they learn in the Explore phase during the next two phases to Explain and Elaborate on the lesson's content.

Remember that some activities are only located on Savvas Realize, like videos and interactivities. You'll also find a digital auto-graded quiz for each lesson on Savvas Realize.

Students will complete Quest Check-In activities throughout a topic, so make sure you've launched the Quest at the beginning!

California Spotlight



At the top organizational level of the program are instructional segments. Each segment contains a set of related topics. The California Spotlight feature will launch the set of topics by introducing a California phenomenon that will help students make sense of the upcoming content.

You'll find instructions for launching and concluding the Spotlight in your Teacher Edition at the beginning of each instructional segment.

You can find digital resources for each Spotlight in the California Instructional Segments folder on Savvas Realize.

Quests

Quest Kickoff

Does X Mark the Spot? That's Up to You!
How can we use Earth processes to find buried treasure?

Phenomenon Hello! I am Salena Patrick, a geologist. I am an expert on landforms. I recently found a bottle with a map inside that shows that hidden treasures are buried deep within three land areas. There was also a clue that says the treasures are buried in locations that will one day be exposed through changes in Earth's surface.

In this problem-based learning activity, you will study maps, build landform models, test how those landforms may change over time, search for treasure, and present your findings. Follow the path to discover what you need to do to complete the Quest. The Quest Check-In activities will help you complete the Quest. You can check off every step you complete with a **QUEST CHECK OFF**. Go online for more Quest activities.

Quest Check-In 1
Lesson 1
Learn how to read different types of maps. Find out how understanding parts of maps will help you locate the buried treasure.

Quest Check-In 2
Lesson 2
Learn about the patterns of some landforms, where they occur, and how they are made.

Quest Check-In 3
Lesson 3
Discover how rocks, minerals, and soil form and how they create Earth's landforms.

Quest Check-In 4
Lesson 4
See how the effects of weathering and erosion shape landforms. Learn how these processes can help you find the treasure.

Quest Findings
Use what you have learned about maps, models, and Earth's features to describe changes your landform underwent and how you discovered the treasure.

VIDEO
Watch a video about a geologist.

CA Next Generation Science Standards
 4-ESS2-1 Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
 4-ESS2-2 Analyze and interpret data from maps to describe patterns of Earth's features.

Activities along the way

I'm glad you asked about Quests! Quests are one of the most important features in the program.

In the Quest, students meet a career scientist who presents an engaging real-world problem to solve, like finding buried treasure! The Quest presents a problem for students to solve using the science content and practices in that topic. They'll complete check-in activities during lessons as they develop ideas, and then they'll present their findings at the end of each topic.

You may be tempted to skip the Quest and jump straight into the lessons, but think again. The Quest will build the background knowledge, purpose, and motivation that are key to helping students connect with the content.

Assessment and Differentiation

Differentiated Instruction

Pathways include...

- Content:** Challenging and engaging tasks related to the subject matter.
- Process:** Appropriate teaching techniques oriented to various learning modalities, and flexible groupings aligned to tasks.
- Product:** Opportunities for students to demonstrate mastery through different modes of presentation.
- Learning Environment:** Supportive, emotionally safe climate and physical spaces for a variety of groupings.

Leads to...

- increased academic learning
- strengthened work habits
- enhanced motivation and engagement

Ensure access and equity for all students!

Access and Equity

Ensuring Access and Equity for All Students

The California Science Framework calls for science teachers to provide all students with challenging, rich, and engaging science experiences. To this end, the Framework states these goals for science teachers:

- develop the knowledge, conceptual understandings, and habits of mind that will allow students to engage in the study of science and engineering;
- provide a climate in which students can develop the skills and attitudes to become science-literate members of society;
- encourage students to become life-long learners of science and to consider careers that require strong learning of science

Celebrate Diversity!

The Culturally Responsive Classroom

California has one of the most diverse populations in the country. You regularly encounter students who are ethnically, culturally, and linguistically diverse, with a range in skills, physical abilities, and living circumstances that impact learning in the classroom. As a teacher, it's important to keep in mind these factors of diversity are not mutually exclusive and that students often represent several populations.

This rich diversity is both a great opportunity and a challenge. All students bring a unique set of experiences and outlooks that should be honored and celebrated to help them achieve their full potential in science and engineering. You can take the following steps to ensure a rich and engaging science classroom that is inclusive, supportive, and elevates all students.

You'll find assessments at the end of each lesson, at the end of each topic, and in the Program Resources folder on Savvas Realize. Let's look at a few of my favorites.

California Elevate Science includes more traditional forms of assessment that show what students *know*, but you'll love the Evidence-Based Assessments and Performance Assessments at the end of each topic that show you what students *know how to do*, including designing and running their own lab experiments! And don't forget the Quest Findings and California Spotlight solutions, where students present their findings based on the ideas they have been developing and refining over the course of each topic and instructional segment, respectively.

All of this may sound like a lot for your little ones, but *California Elevate Science* educators believe that all students can engage in meaningful scientific inquiry! So, let's find out how.

Look for the ELD Support and Differentiation sections in your Teacher Edition for point-of-use tips on differentiating to all students—struggling students, English language learners, and advanced learners.

And the front matter of your Teacher Edition is chock-full of resources about ensuring access and equity in your classroom. Check them out!

And one last tip to remember: If some of your students struggle with reading, they can use the audio support features in the Realize Reader eText to have the text read aloud to them.

Time Management Strategies

Lesson 1 Planner
Energy Conversions

Lesson Objective
• Describe how natural resources are converted to energy and fuel.

ENGAGE

- STEM Connection (5)
- Vocabulary App (5)

EXPLORE

- STEM Investigate Lab *How can a potato provide energy to a light bulb?* (45)
- Lesson 1 (15)
- Additional Standard Document

EXPLAIN & ELABORATE

- Electrical Energy Changes Forms (10)
- Lesson 1 (5)
- Quest Check-In Human Power (10)
- Enrichment Activity (15)

EVALUATE

- Lesson 1 Check (10)
- Lesson 1 Quiz and Remediation (20)
- ExamView DVD (20)

Yellow clocks indicate key activities

Short on time? Focus on these resources.

As a former elementary teacher, I know how difficult it can be to find time for teaching science when other subjects seem to always take priority. So, if you're pressed for time, use the Lesson Planner to find each lesson's core activities. They're indicated by a yellow clock.

Also, here's a little secret between us. Use those Literacy Connections, Leveled Readers, and STEM Math Connections to bring *California Elevate Science* activities into your math or literacy blocks! You can't go wrong when the standards are listed right there in the Teacher Edition!

Closing



Thanks for joining me.