

# Elevate Science 2019 Program Overview

## *Home*



Hi, I'm Becky, 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 Elevate Science 2019 and how it can equip you to support a culture of scientific inquiry in your classroom.

## Program Materials



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

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

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

The Student Edition contains reading selections, activities, lab sheets, assessments, and more. The *Nature of Science Handbook* at the end of the text contains information and activities around the science and engineering practices.

Students can complete these activities in their writable print version or the Realize Reader Student eText. Many students will love the option to hear the text. Students can also download some activities as a Word doc, and starting in Grade 2, students can answer questions in a digital notebook that you can view and grade! Here's a link to a tutorial that will show you how to do just that.

Students can also complete interactive versions of activities on Savvas Realize.

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.

You may have also received equipment 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. A list of these items is found at the beginning of each topic in the Teacher's Edition. Or use the virtual labs instead!

## Teacher's Edition

**uEngineer It! Design STEM**

**INTERACTIVITY**  
Assign the **Engineering Activity** after students complete the Design It exercise.

**What it is:** A highly interactive, multipage digital activity with engaging visuals.

**What it does:** Allows students to practice using criteria to evaluate competing design solutions using a fun example.

**How to use it:**

- Students will click on the screens to evaluate the width of the canyon at various sites to determine where a bridge should span and which type of bridge should be built.
- Students will finalize the activity by evaluating the pros and cons of each site along the canyon.

**Take a Hike!**

**Using Phenomena** When students are asked to explain phenomena and design solutions to problems, they develop deeper and more transferable knowledge. **DOK4**

To set the stage for the Design It activity, ask: **DOK4**

- What does the word criteria mean? (Guide students to answer the question by asking if "qualities or characteristics a product needs to have" sounds like a good definition for criteria.)
- What does the word constraint mean? (Guide students to answer the question by asking if "a limitation or restriction" sounds like a good definition for constraint.)
- What are some characteristics of a desert that are important to keep in mind when building a trail? (Guide students to reference key points in the text, such as "The desert is very dry and often very hot during the day," or "Deserts are very sandy or rocky, and sandy soil tends to collapse over time.")

**Next Generation Science Standards**  
**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.

**uEngineer It! Design STEM**

**INTERACTIVITY**  
Go online to already made links from around the world.

**Take a Hike!**

Desert terrain can be extremely difficult to cross. The desert is very dry and often very hot during the day. The temperature can become very cold at night or at certain times of the year. High winds can produce sandstorms.

Deserts are very sandy or rocky, so building on them is also difficult. Sandy soil tends to collapse over time. A road built on sand will crumble much faster than one built on more solid ground. Engineers must develop unique solutions to build any kind of structure in a desert.

A popular desert park wants to open a new hiking trail for visitors. The trail will bring visitors over difficult terrain to see some unique desert features. The engineers who will build the trail must come up with some unique solutions. The trail must be easy to walk on. It must also be built without disturbing the environment too much.

**Engineering Design Process**

Define Problem → Develop Solutions → Optimize Solutions

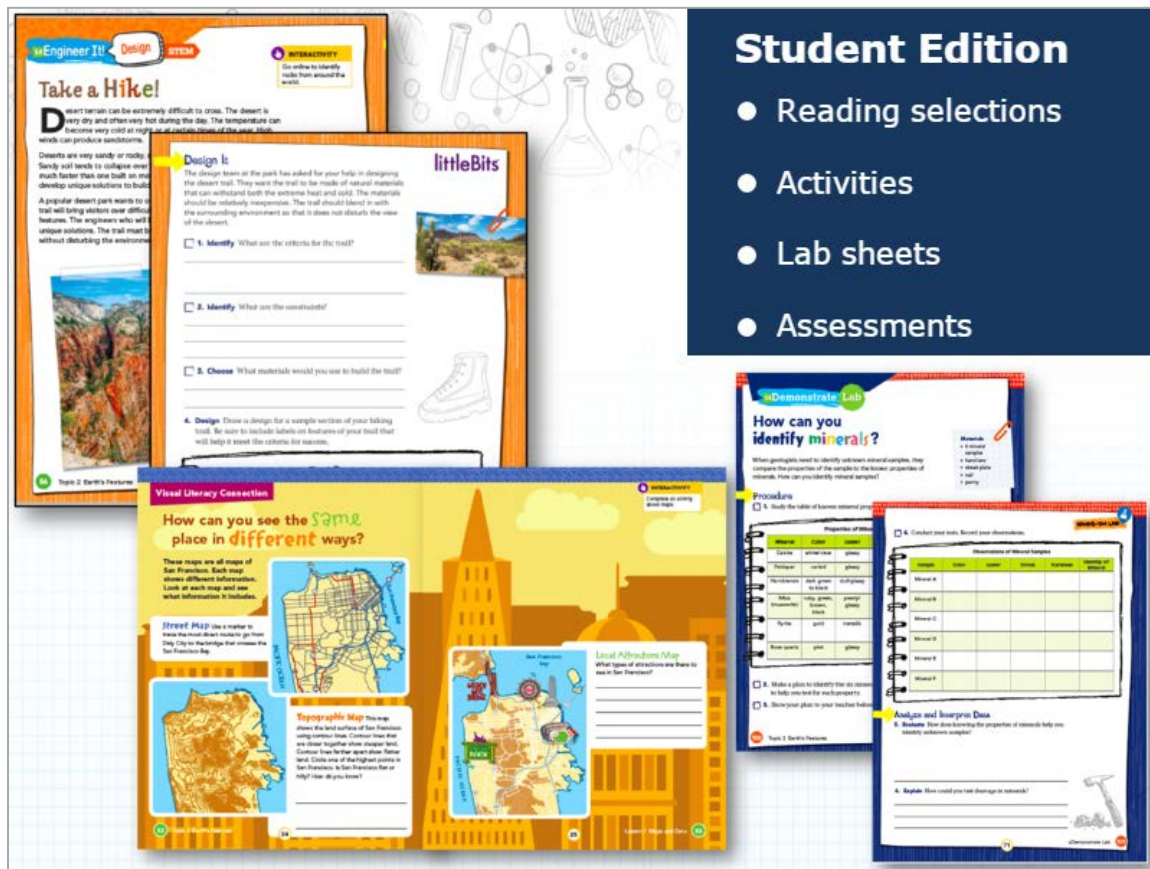
In the uEngineer It! activity, an engineering team at a desert park has asked students to help design a new trail. Briefly explain the engineering design process to students. Start out by asking students to identify the problem. After students complete the activity, have them explain their designs. Suggest that students elaborate on why particular features of the trail will help meet the criteria for success. To complete the design process and optimize solutions, encourage students to think carefully about the practicality of their design in real life. Lead a brief class discussion about other ways they might need to modify or adjust their designs in order to make their designs practical.

**Teacher's Edition**

- Mirrors Student Edition
- Contains additional front and end matter and embedded supports

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## Student Edition



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## 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.

## Materials Kits



- Classroom Materials
- Labware Safety
- littleBits™ STEM Invention
- Maker Crates

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## Typical Lesson

**Quest Kickoff**

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

Watch a video about a geologist.

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

**Lesson 2**  
Learn about the patterns of some landforms, where they occur, and how they are made.

**Lesson 3**  
Discover how rocks, minerals, and soil form and how they create Earth's landforms.

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

**Lesson 5**  
Florida has many resources. Find out how erosion can impact the availability of these resources.

**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.

**NC.8.EE.4** Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice). (Also NC.8.EE.5, NC.8.EE.6)

16 17 Quest Kickoff 45

Before we look at the lesson detail, let's zoom out a little. First and foremost, make sure you've set up each topic with the Quest Kickoff.

In the Quest, students meet a career scientist who presents an interesting 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.

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

Just remember-Connect, Investigate, Synthesize, Demonstrate. These four things describe what students will be doing in each lesson phase. And follow the 5E inquiry process of Engage, Explore, Explain, Elaborate, and Evaluate.

Connect activities build background knowledge that can help students engage with the phenomena and make sense of the lesson's context.

Investigate activities are my favorite. This is where you'll find labs and videos where students explore the scientific phenomena.

Next, they synthesize what they've experienced through activities like interactivities, Quest Check-Ins, and



classroom discussions to test out their ideas on a problem situation to see what works and why.

Finally, they'll demonstrate what they've learned through a Quiz and maybe a Quest Check-In.

Don't forget the Topic Close, where students will put what they've learned into their Quest Findings!

## Assessment and Differentiation

**Demonstrate Lab**

### What makes something sink or float?

Boat engineers collect data about if materials sink or float before they build a boat. How can you collect data to tell which objects sink or float?

**Procedure**

1. Choose and observe four objects. Predict if each one will sink or float.
2. Make a plan to test each object. Show your plan to your teacher.
3. Run your test. Collect data in the table.

**Materials**

- bin
- water

**Suggested Materials**

- paperclips
- corks
- erasers
- popsicle sticks
- foil sheets
- small balloons
- clay

**Science Practice**

Scientists **collect data** when they investigate a question.

Topic 1: Properties of Matter

- Evidence-Based Assessments
- Performance Assessments

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.

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, where students present their findings based on the ideas they have been developing and refining over the course of a topic.

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

Look for these sections in your Teacher's Edition for tips on differentiating to all students-struggling students, English language learners, and advanced learners.

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.

Find out more about digital and auto-graded assessment options and data in these tutorials!

## Digital Materials



The Assignments option provides information on the status of your assignments.

You may be wondering how useful the digital program will be if computers are in short supply for your students. But guess what? Even with a single computer, you can blend in the digital resources. And you don't want to miss the incredible videos and interactivities that Savvas Realize has to offer!

Let's take a quick interactive tour of the Savvas Realize platform, where your digital course is housed.

Once you've logged in, you'll notice that the Savvas Realize home page is divided into three sections- Programs, Classes, and Data. Hover over each section to learn more.

Use the activities on Savvas Realize to project for the class or assign individually for students to complete on their own.

Still feeling a little shaky about navigating and using the Savvas Realize platform? Here are some additional tutorials you can visit to learn more on My Savvas Training. Click any link to open it in a new window.

And if that's not enough, there's plenty more!

## Time Management Strategies

**Lesson 4 Planner**

### Use Liquids and Gases

**Lesson Objective**  
• Investigate how the properties of some liquids and gases make them useful.

CONNECT	INVESTIGATE	SYNTHESIZE	DEMONSTRATE
<ul style="list-style-type: none"> <li>Jumpstart Discovery!</li> <li>Vocabulary App</li> </ul>	<ul style="list-style-type: none"> <li>Investigate Lab: How can we make a bigger bubble?</li> <li>Lesson 4</li> <li>Use Liquids and Gases</li> </ul>	<ul style="list-style-type: none"> <li>Experiment with Solids, Liquids, and Gases</li> <li>Quest Check-In: Liquid and Gas Toys</li> <li>Enrichment Activity</li> </ul>	<ul style="list-style-type: none"> <li>Lesson 4 Quiz</li> <li>ExamView DVD</li> </ul>

**Next Generation Science Standards**

- 2-PS1-1** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- 2-PS1-2** Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
- SEP.3 Planning and Carrying Out Investigations** Plan an investigation collaboratively to produce data to serve as the basis for evidence to answer a question.
- CCC.2 Cause and Effect** Simple tests can be designed to gather evidence to support or refute student ideas about causes.
- CCC.4 Systems and System Models** Systems in the natural and designed world have parts that work together.

**ELA, Math, and ELD Standards**

**English Language Arts**

- RI.2.8** Describe how reasons support specific points the author makes in a text.
- W.2.7** Participate in shared research and writing projects (e.g., read a number of books on a single topic; to produce a report; record science observations).
- W.2.8** Recall information from experiences or gather information from provided sources to answer a question.

**Mathematics**

- MP.2** Reason abstractly and quantitatively.
- MP.5** Use appropriate tools strategically.

**English Language Development**

- English language learners communicate for social and instructional purposes within the school setting.
- English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

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 Elevate Science activities into your math or literacy blocks! You can't go wrong when the standards are listed right there in the Teacher's Edition!

## Closing

**On-Demand  
Tutorials & Guides**



**Live Webinars  
& Workshops**



**Support Tools  
& Resources**



Thanks for joining me. For additional Elevate Science tutorials, please visit [MySavvasTraining.com](https://www.mysavvas.com).