

## With the Right Support, It's Full **STEM** Ahead

STEMscopes™ is a comprehensive, online preK-12, hands-on science curriculum that puts teacher support at its center

Developed by Teachers

Interactive and Hands-on

Aligned to the Toughest Standards

Works in Traditional, Blended and 1:1 Classrooms





At Accelerate Learning we understand that student success does not happen without great teachers. And teachers need support. Everything we do starts by looking through the teachers' lens and asking, "what makes sense for the science classroom of today, and tomorrow?"

Accelerate Learning, in conjunction with Rice University, has created the most widely used PreK-12 science curriculum in Texas, STEMscopes™ — and it's now available nationally. It's the teachers favorite science program and now serves more than 1.4M students.

Affordable for schools, engaging for students, and easy to use for teachers, STEMscopes drives student achievement by supplying teachers with soup to nuts (or atoms to mass) core content and supplemental activities delivered in customizable ways that can be adapted to unique teaching and learning styles.

**We give science educators a STEM-centric program that offers the right combination of content and technology.**



# supported

“ Throughout my teaching career, we've used a lot of different curriculum programs and what really sets STEMscopes apart from them is that it's written by current classroom teachers and instructional specialists. ”

— Jennifer, 4th Grade Teacher



# engaging

“ I love STEMscopes because my kids love STEMscopes! A lot of times, they will ask to do the activities instead of playing a game. They love it because they are in charge of the experiments and it puts the learning in their hand and they really get excited about the science! ”

— Eleda, 3rd Grade Teacher

# proven

“ STEMscopes is the right tool. There is a positive correlation between teachers who implement STEMscopes fully in their classroom and student success. ”

— Denise Skinner, former STEM coordinator, Texarkana ISD



# The Stem of **STEM**scopes

STEMscopes distinguishes itself from textbook companies by providing an immersive science curriculum that embraces learning by doing — just like a science classroom. As a result, students score higher using STEMscopes thanks to custom-tailored lessons that can be easily differentiated for all learning styles.

## 100% Digital

Access and flexibility is key for any science program. STEMscopes is 100% online, accessible 24/7, with up to 35 resources per standard to teach in any classroom setting from traditional to blended to 1:1 classrooms.

STEMscopes access extends to the home, with a parent and student online portal.

Teachers are able to easily access professional development FAQ's, videos and up-to-the minute robust analytics.

## Adapts to Your Teaching Style

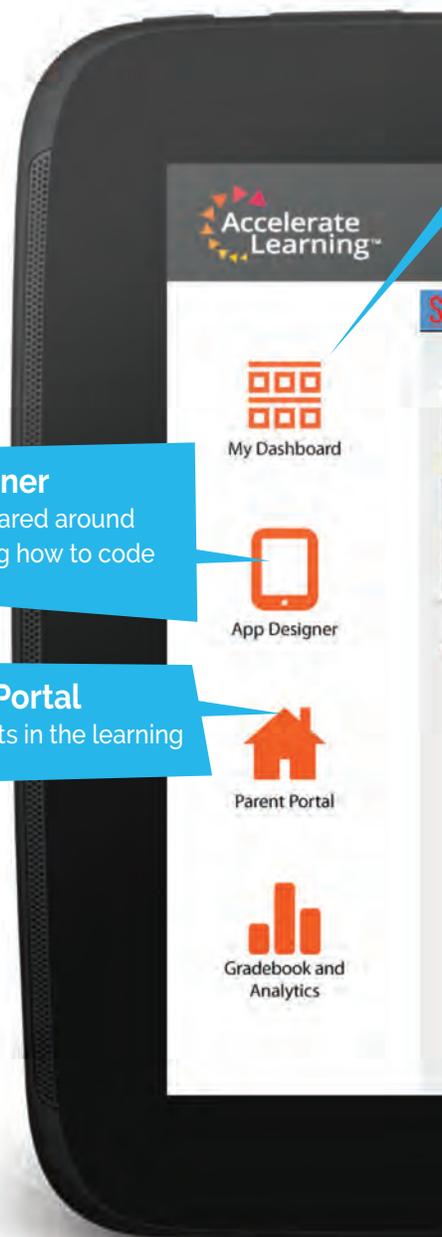
Whether teaching one-to-one, whole group or small group, STEMscopes customizes to a teacher's classroom scenario. Check out these flexible components that lets teachers customize their classrooms:

**Kits:** Hands-On Kits: Inquiry Material Kits, Consumable Kits & Basic Science Equipment Kits

- › **Hands-on inquiry STEMscopes Kits** are separated by reporting category, NGSS or state standard, and activity to provide quick classroom setup
- › **Consumable Kits** are the materials needed when a teacher teaches multiple classes
- › **Basic Science Equipment Kits** are the tools needed to teach science i.e. beakers, graduated cylinders, goggles and are just for K-5

## Printed and Digital Student Support Materials:

- › **STEMscopedia:** a student/parent primer rich in background knowledge and home connections
- › **Explore Journal:** a hands-on investigation journal that serves as a companion to the Explore labs (next-step inquiry activities for secondary)
- › **Science Literacy:** a fusion of reading and writing exercises based around every science NGSS or state standard



### App Designer

Design apps to be shared around school without knowing how to code

### Parent Portal

Involve your parents in the learning



## 100% Digital!

All students have their own logins and can readily stream video content, play games, take assessments, and participate in group discussions via the dashboard.

## Activities

With up to 35 activities per objective, every student has a chance to learn

The screenshot displays the STEMscopes website interface. At the top, there are navigation links for Home, About, and Blog. Below that, a search bar and a 'School District Preview' button are visible. The main content area is titled '8.5E Chemical Reactions' and includes tabs for Essentials, Engage, Explore, Explain, Elaborate, Evaluate, Intervention, Acceleration, and All. A 'Student Expectation' section states: 'The student is expected to investigate how evidence of chemical reactions indicate that new substances with different properties are formed.' Below this is a 'Key Concepts' section with bullet points: 'Matter is composed of atoms that have physical and chemical properties that can be used to identify a substance.', 'When a chemical reaction occurs, new substances are formed that have different properties than the original substances.', and 'Common products of a chemical reaction include a gas, a precipitate, or a color change.' To the right of the text are several expandable sections: Teacher Background, Standards Correlations, Materials List, Scope Summary, Answer Keys, and TEKS Unwrapped, each with a 'T' icon. Below the text is a 'Sorting Now: Assignments Completed (Low-High)' dashboard. This dashboard shows a grid of student progress bars for eight students: Keara Da., Caitlyn Kl., Bailey Ml., Jack Hg., Jack Hg., Kennedy Bm., Taylor Gb., and Ana Ei. Each student has a progress bar and a small table of data below it. The data table for each student includes columns for 'other date', 'average', '512', 'N78', 'performance', and 'strategy'. The progress bars show varying levels of completion, with some students having more than one bar.

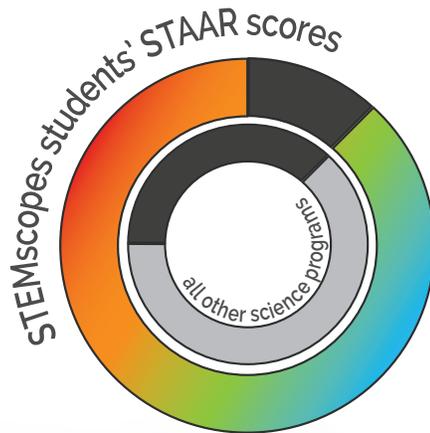
## Meaningful Analytics

The STEMscopes analytics engine helps teachers easily follow student progress to assist in prescribing intervention and differentiated instruction.

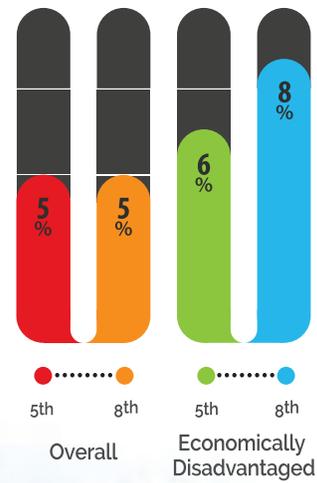
# The Proof is in the Research

**When it works, it works.** The research team at Rice University Center for Digital Learning and Scholarship analyzed data collected from 345,000 students, across diverse populations, and found that students who use STEMscopes routinely outperformed other students using any other science curricula on the 5<sup>th</sup> and 8<sup>th</sup> grade State of Texas Assessment for Academic Readiness (STAAR™).

*On average, STEMscopes users significantly outperform other science programs.*

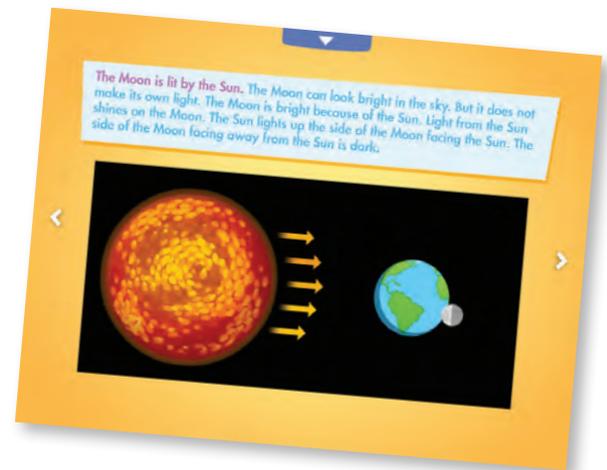


Percent Increase over non-STEMscopes



# STEMscopes Features

- › Hands-on inquiry based science investigations
- › Problem based learning activities
- › All teacher materials are free
- › Free Spanish version K-5
- › Customizable pre, formative, and summative assessments, plus the Assessment Generator
- › Math, ELA and writing connections in each module
- › Embedded Intervention and Acceleration programs
- › Three supplemental print books
  - Student Journal
  - Science Literacy
  - STEMscopedia
- › Text-to-speech button in English and Spanish
- › App Builder (easily build your own mobile device apps)
- › Engineering and Career Connections
- › Writing prompts
- › Concept reinforcement with ScienceArt™ activities, SciRave™ and interactive virtual science games
- › E-books, content videos, and problem based learning



## What to Expect from STEMscopes:

- › 100% teacher centric since it was developed by teachers and tested in classrooms
- › Consistent instruction from grade-to-grade with PreK-12 vertically-aligned curriculum
- › Students are thoroughly engaged with reading, writing, math, engineering, technology, art and music
- › Teachers have a snapshot of where students are using formative and summative assessments
- › Parents get involved through the Parent Portal
- › Adaptable to various learning styles
- › Training and on-going support for teachers, supervisors, and principals
- › NGSS-aligned and customizable to individual state standards

## Start Growing Young Minds

STEMscopes Early Explorer curriculum was thoughtfully designed by PreK teachers with the busy PreK teacher in mind. Early Explorer works well in traditional, blended or 1:1 classrooms.

### Foster inquiry and discovery for young children

- › The first of its kind. Built from the ground up to Head Start and state PreK guidelines and scaffolded to prepare students for NGSS Kindergarten standards

### Figure out which students are getting it

- › Observation and progress reporting tools

### Fit any classroom model

- › Pick and choose curriculum based on the centers available

### Save Money

- › As low as \$4.75/student/year to jumpstart your Pre-K student to success in science

### Features

- › 12 modules with 15-20 center-based activities per module
- › Easy to use assessments with observation and progress monitoring tools
- › Question guides and ready-made center student templates for easy set up
- › 24 Big Books centered around science concepts —both fiction and non-fiction
- › 12 Apps students can play, centered around science concepts
- › Spanish student materials
- › Parent letters at beginning and end of each module
- › Embedded STEMcoach curriculum and best practices support
- › Vocabulary development lessons
- › Question prompts to guide students in their development of skills and concepts





## Four Modules, One Proven Way to Teach Pre-K Science

STEMscopes Early Explorer follows four key, easy-to-follow lesson design sequences:

### Ramp Up

An introductory hands-on activity and song to spark the students' curiosity followed by a series of **daily starter activities** to keep students engaged throughout the full module.

### Round Up

A wealth of **ideas for centers-based individual and small-group self-guided lessons** which allow the students to further explore the concept through all their modalities, including making literacy, math, and engineering connections. It is easy for the teacher to differentiate because there are so many centers to choose from!

### Wrap Up

Teachers are able to **evaluate their students' understanding** through questioning while students show what they know by creating a culminating project to take home to parents.

### Keep It Up

A collection of **extended investigations** built to increase student understanding before and after topics have been covered in class. These group investigations pave the way for students to begin thinking scientifically. With 12 modules in Physical, Earth and Life Sciences, STEMscopes Early Explorer was also designed with strong connections to ELA, Writing and Math — rounding out PreK education needs..



## State Edition STEMscopes

### Align Curriculum to Your State Standards

- › 100% customizable to varying standards
- › Available K-5, 6-8 and 9-12

### Implement the proven 5E Instructional Model

- › Every module in each grade level uses the 5E method of teaching with an emphasis of students learning science hands-on and includes intervention and acceleration strategies

### Everything a Teacher Needs in One Place

- › No more cobbling together materials

### Get the Most out of Your Dollars

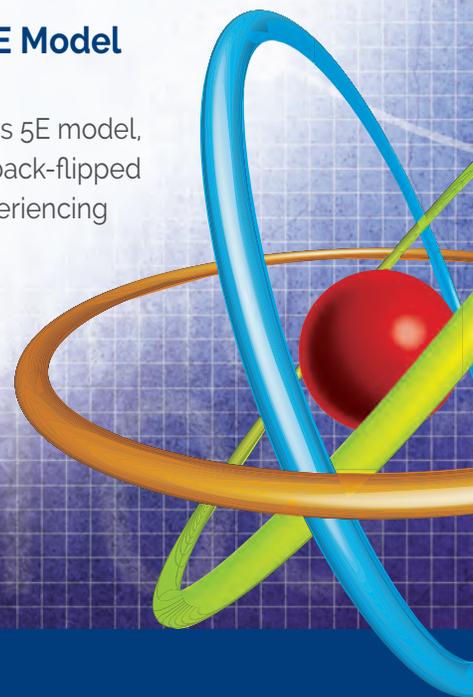
- › As low as \$4.75/student/year for everything you need

### Features

- › 20 - 35 modules for each grade level focusing on all science concepts
- › Teachers guide and answer key
  - › Hands-on inquiry-based activities with math and reading connections
  - › Teacher background information with pre-formulated student questions
  - › A wide variety of assessments including writing, open-ended response, and multiple choice for every unit

### Rooted in the Scientifically Proven 5E Model PLUS Intervention and Acceleration

STEMscopes K-12 pedagogy has its roots in Bybee's 5E model, Gardner's theory of Multiple Intelligences, and the back-flipped classroom wherein students learn by doing and experiencing rather than passively observing.



## Engage

### Student Benefit

Students get hooked on the science lesson through demonstrations and real-life applicable short activities

### Teacher Benefit

Pre-assessments lets teachers know where students are and additional teaching strategies put them on individual paths

## Explore

Students conduct investigations to build upon their prior knowledge as well as generate new ideas

Set-up videos help teachers see the lesson, materials set-up, and student outcome expectations.

## Explain

Students use collaborative and fun grouping strategies and interactives to share their explanations of the exploration activities

Question prompts are provided along with student responses, and built-in progress monitoring helps determine intervention needs

## Elaborate

Students are challenged to extend their conceptual understanding and apply their skills.

Leveled options help teachers meet the unique needs of individual students.

## Evaluate

Students demonstrate learning in the Writing Science activities aligned with most state standard Writing Expository prompts.

Standards-based post-assessments help teachers gauge student mastery in relational to high-stakes exams.

# Demystify the Standard

There's no doubt that the Next Generation Science Standards are a challenge, but together we will get through them and create a bright future for our students. STEMscopes NGSS demystifies the Next Generation Science Standards into digestible modules for your K-12 students. From hands-on, inquiry-based investigations to rigorous claim-evidence-reasoning assessments, we take the guess work out of teaching NGSS standards. [Available K-5, 6-8 and 9-12]

## Get the Latest Content

- › The ONLY program written from the ground up and directly from the NGSS standards without using old, existing content.

## Built to Each NGSS Standard

- › Every NGSS Disciplinary Core Idea, Performance Expectation, Cross-cutting Concept, and Science and Engineering Practice is covered.

## Access Multiple Hands-on Lessons for Every Standard

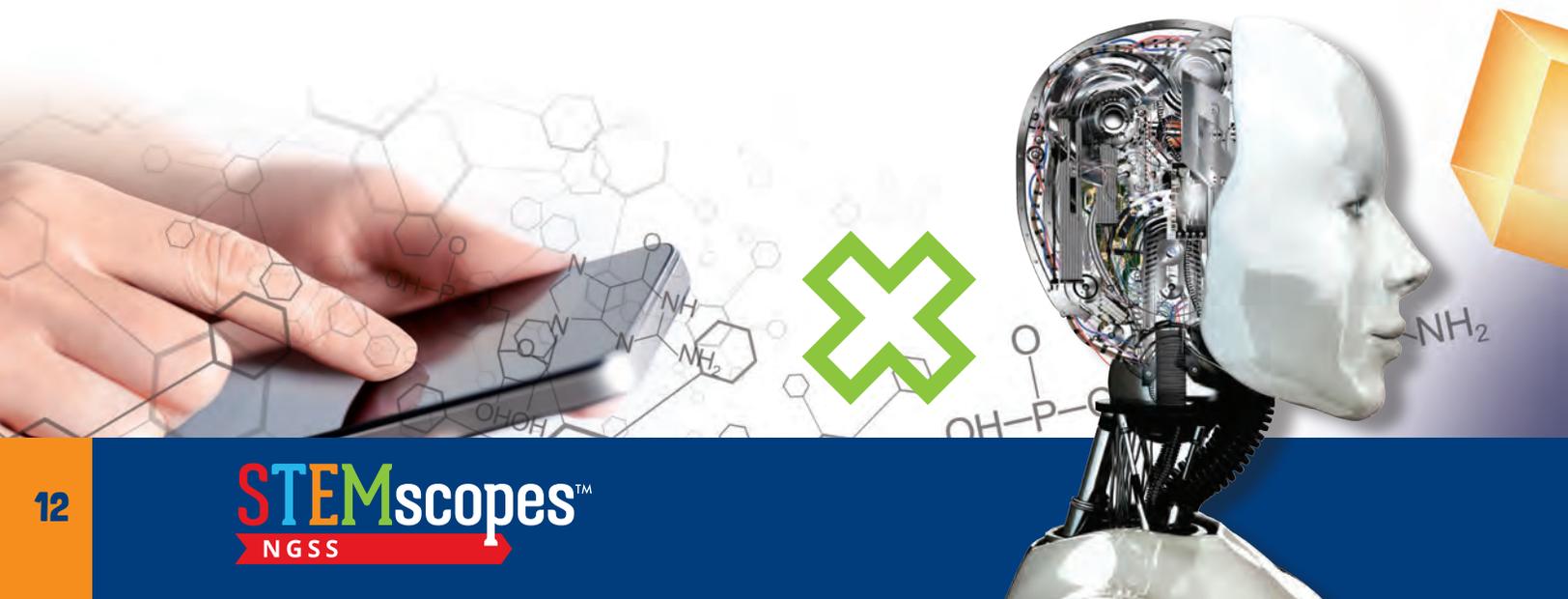
- › Each module for NGSS has 2-5 hands-on activities including project-based learning, engineering solutions, and virtual investigations

## Enjoy a Low Price

- › As low as \$4.75/student for an entire year of a NGSS-aligned complete curriculum

## Features

- › Standards are embedded in modules – practices, Crosscutting Concepts, etc.
- › Spanish version is FREE
- › Variety of assessments — performance-based, open-ended, Multiple Choice, Claim - Evidence - Reasoning
- › Embedded STEMcoach curriculum and best practices support





### **Illuminate**

Students activate prior knowledge through a short hook activity that prompts them to question the scientific phenomenon they are about to experience. Teachers may also use this as a pre-assessment.

### **Do**

Students dive into a multistep combination of hands-on investigations, engineering solutions tasks, and PBLs (Problem Based Learning) that builds not only their context for the academic knowledge of the standard but also 21st century skills.

### **Expand**

Students can engage with powerful differentiated activities to meet each of their individual needs — reading, math, and hands-on extensions.

### **Assess**

Each student's level of mastery becomes clear through formative and summative assessments presented in multiple formats, including claim-evidence-reasoning.



## STEM Support On Overdrive

Without a quality, go-to resource for training, even the best-designed program falls short. Accelerate Learning is committed to supporting teachers through a STEM PD journey that not only offers full product support, but will enable teachers to instill a classroom passion for STEM that drives students to take ownership of their learning.

Training for STEMscopes State Edition, NGSS, and Early Explorer is available in 3 phases:

**Launch Training:** Teachers familiarize themselves with the selected program. We keep on-going support via periodic webinars and advanced classes to help teachers supplement the foundational skills they developed in the initial training.

**Mentoring:** Individual or groups of teachers spend time with a STEM education expert to understand deep nuances and dynamics of teaching STEM, and how the science class impacts student's lives. Mentors fill multiple roles for new and veteran teachers in that they can help structure PLCs, provide emotional and professional support, and help teachers deeply understand STEMscopes to more effectively use it.

**Ongoing Support:** One-on-one classroom coaching opportunity for teachers with the objective to make every teacher a STEM expert. Coaches model key practices, such as inquiry-based teaching, and help teachers take a deep dive into student data. Coaches also help teachers critically reflect on their strengths and weaknesses to ensure growth in each teacher.



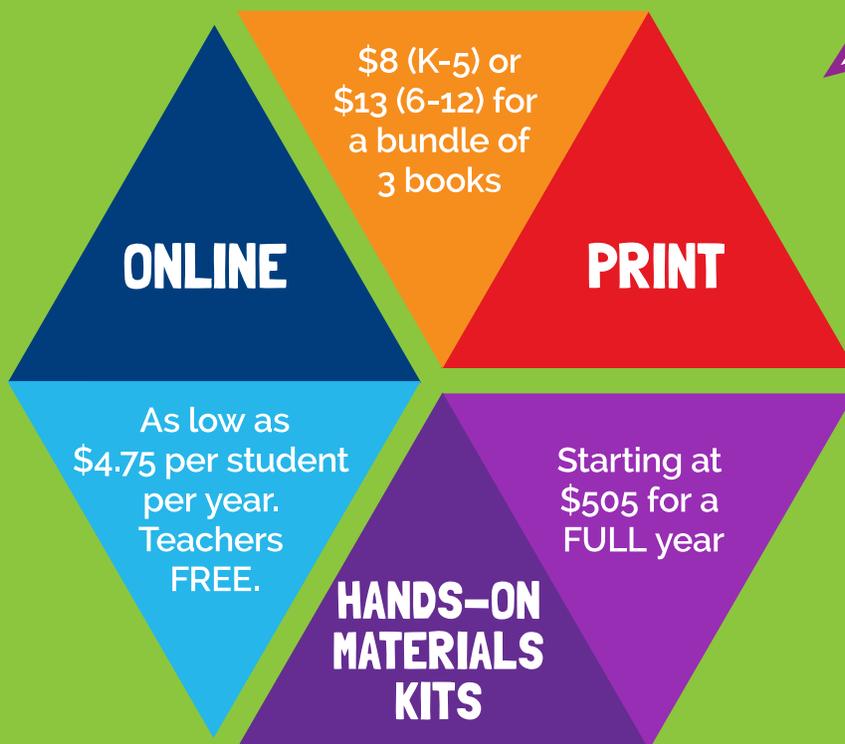
## Coming this Summer! 24-hour STEM Support Online

Everything STEM is coming online. Extend your professional development with a free online resource-rich portal offering STEM expert webinars, lesson sharing by other teachers, student and teacher contests, newsletters and much more.

Visit and bookmark [STEMcoach.com](http://STEMcoach.com) for updates!

# Affordable Pricing for STEMscopes

The STEMscopes PreK-12 digital programs provide all teacher and student learning materials needed for a full school year of success, for as low as \$4.75/student per year. Don't forget, Teachers are FREE.



From Atoms to Mass,  
Let Us be Your STEM

**STEMscopes™**  
PREK-12

