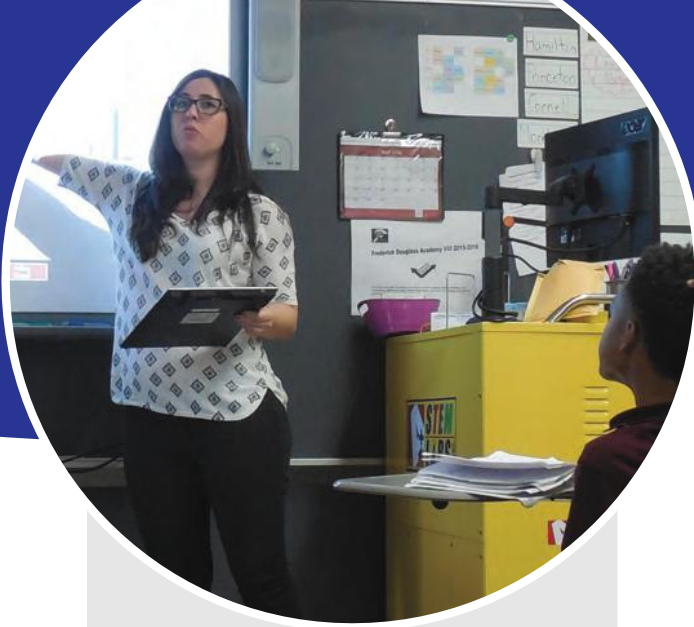


A+ STEM Labs turn any classroom into a high-tech learning laboratory.

www.APlusStemLabs.com



making **STEM** *achievable*



“My A+ STEM Lab has completely revolutionized instruction and student engagement in my 6th grade classroom. What I love most is how easily we were able to integrate its tools into our existing classroom routines. The possibilities with these tools are truly endless.”

— A. ADELFO, TEACHER
FREDERICK DOUGLAS ACADEMY VIII
MIDDLE SCHOOL, BROOKLYN, NY

The future of our economy is in STEM. So is the future of our students. *The U.S Bureau of Labor Statistics** reports that occupations in science, technology, engineering and mathematics are growing by about 1 million jobs per year. How well is your school preparing students for the 21st century work force?

A+ STEM Labs makes it possible for K-12 schools to deliver robust, grade-appropriate, technology-driven STEM education through hands-on activities and experiments that map easily to any curriculum. We also make it as easy as possible for teachers to integrate our technologies within their classrooms, helping them to better manage classroom time, student evaluations and presentation of content.

* Source: 2010 Standard Occupational Classification (SOC) System, SOC Policy Committee recommendation to the Office of Management and Budget. Healthcare occupations are not included.



The future of our economy is in STEM. So is the future of our students.

Testing has never been easier for teachers and more fun for students.

Your Curriculum, Only Better!

As standards and core curriculum differ by state and sometimes even by district, **A+ STEM Labs** embraces a flexible approach that provides a range of experiments and activities that map to the programs you already have in place. There is no "one way" or "right way" to use our labs. Our solutions are designed to support and enhance your curriculum of choice, letting you focus on the subjects and core competencies most relevant to your classroom.

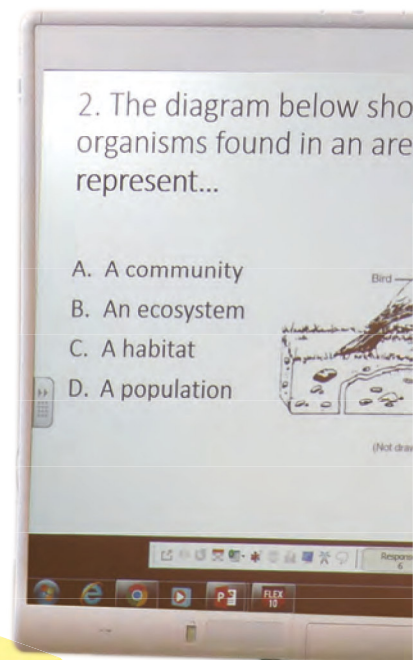
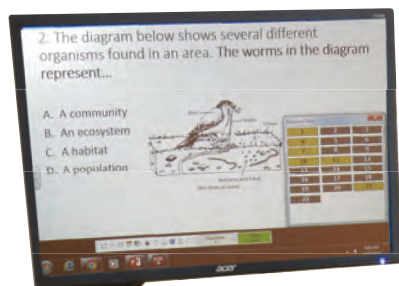
Each **STEM Lab** is configured for K-5, middle school or high school, with subject specificity for high school labs. We'll work with you on specific configurations to meet your needs. Some of the subject areas we support are:

- Elementary Science Experiments
- 5 Minute Activities
- Science at Work
- Science of Sport
- Alternative Energy
- Level 2 & 3 Biology
- Level 2 & 3 Chemistry
- Level 2 Physics
- Level 3 Physics Electricity and Heat
- Level 3 Physics Light, Sound and Pressure
- Level 3 Physics Forces and Motion

Measure Students' Success

Engage, monitor and measure your students' mastery of classroom content through the **A+ STEM Lab's** student response system, which includes assessment software and student "clickers." Easy-to-use software lets you insert response questions right within your PowerPoint slides. Create and deliver self-paced benchmark, district, end-of-course and state level assessment exams. Testing has never been easier for teachers and more fun for students.

- Digital answer submission eliminates hassle and cost of bubble sheet collection and scanning
- Save time with on-demand data scoring and reporting within software
- Simple import/export of data to any third party system



A+ STEM LABS FOR SCIENCE

A+ STEM Labs believes that hands-on learning makes for memorable learning and greater retention of concepts. Our labs encourage students to act like “real scientists” by participating in experiments that use data they personally collect and sample from the world around them. All our **STEM Labs for Science** feature scientific probes and data loggers offered in configurations tailored for the needs of Elementary, Middle or High School students. We also offer a specially configured Pre-K version.

Each of our labs can support hundreds of grade-appropriate experiments. Here is a small sample of the types you will find:

Pre-K

- *Does light shine through everything?*
Use light sensors to see how well light travels through different objects.
- *What makes the most noise?*
Use sound sensors to measure changes in sound levels from different noises.
- *What happens when we exercise?*
Use fever strips and a heart rate monitor to measure changes in pulse and temperature after vigorous activity.

A+ STEM Labs engage students with a



Elementary

- *How do different surfaces and colors reflect light?*
Use light sensors to take measurements and compare.
- *How do different activities affect your heart rate?*
Use the heart rate monitor to measure changes in your pulse.
- *How well do different sunglasses block out light?*
Use light sensors to take measurements and compare.



Hands-on learning makes for memorable learning and greater retention of concepts.

dynamic, interactive teaching platform.

“My students feel like real scientists, using the tools real scientists use.”

— K. Terelli, TEACHER
Philip J. Abinanti PS 108, Bronx, NY

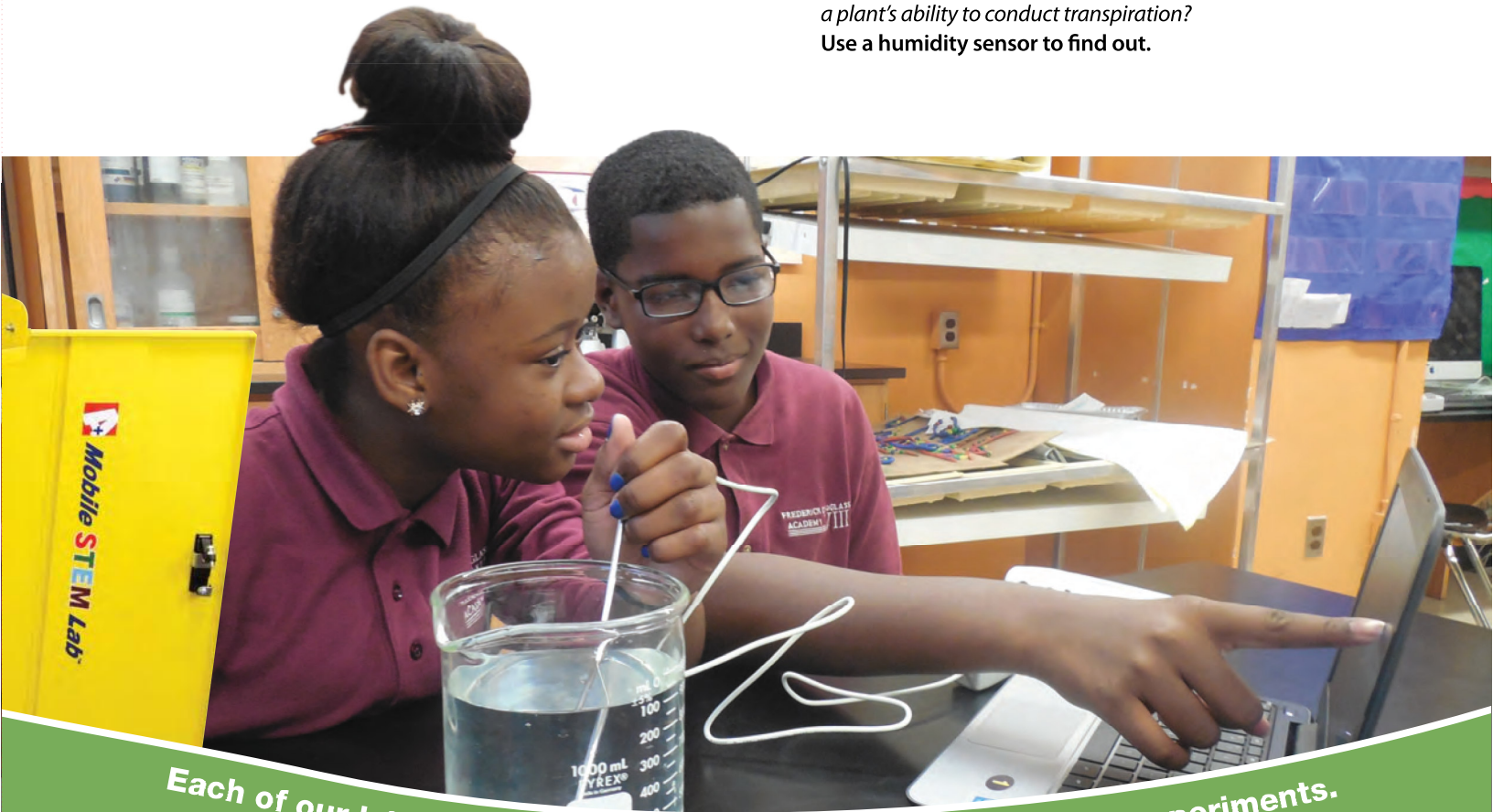


Middle School

- *How do different objects leave a heat signature?*
Use an infrared sensor to measure the heat radiating from objects and left behind by them.
- *How well does the body regulate temperature?*
Use a heat sensor to measure body temperature as it is exposed to changing environmental conditions.
- *Does voltage and current vary with load?*
Connect a voltage sensor to a wind turbine and take measurements as the load changes.
Chart the relationship.

High School

- **PHYSICS LAB:**
What is the relationship between kinetic and electrical energy?
Use a spinning magnet and a voltage sensor to collect readings, then see how the power curve varies with speed of magnet, current and voltage.
- **CHEMISTRY LAB:**
What happens during an endothermic reaction?
Conduct a calorimetric experiment within an aqueous solution while measuring temperature changes.
- **BIOLOGY LAB:**
How do different environmental and physical factors affect a plant's ability to conduct transpiration?
Use a humidity sensor to find out.



Each of our labs can support hundreds of grade-appropriate experiments.

A+ STEM INTELLIGENT LAPTOP CARTS

The **Intelligent Laptop Cart** is a complete teacher's command center that enables teachers and students to make the most productive and efficient use of personal laptops or tablets in the classroom. In addition to **providing each student with the power of a personal PC**, it gives the teacher a set of easy-to-use tools to effectively monitor and manage all student computer usage, as well as push content to individual and/or the entire classroom's laptops.

The **Intelligent Laptop Cart** also integrates with a range of presentation equipment, our student response system, and a selection of "Specialty Kits," including the **NAO Robot**, **K'Nex Education** and **3-D Modeling and Printing**. It also serves as the perfect platform for any computer based educational programs, including web/game design, programming, robotics, reading intervention, CAD/CAM, video editing and much more.

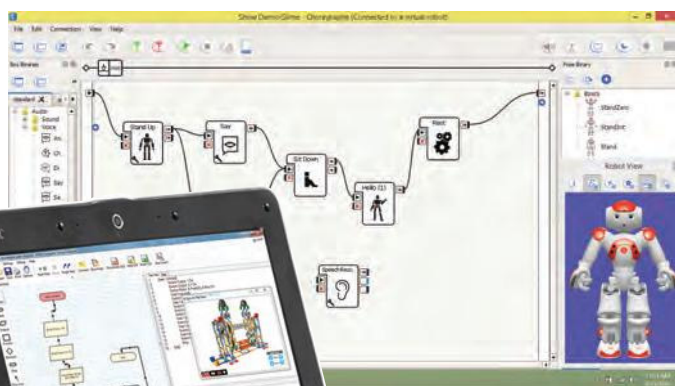
Classroom management tools include:

- Monitor and control
- Screen blanking
- Teacher screen broadcasting
- Video and audio streaming
- Student demonstration
- File transfer and distribution
- Managing tests and quizzes
- Group collaboration



SPECIALTY KITS

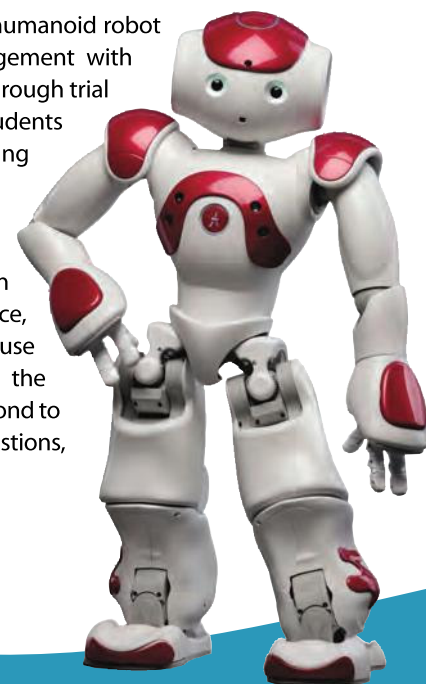
Our special activity kits integrate seamlessly with **A+ STEM Labs**. Use them as a foundation for special classes, extra-curricular clubs and programs, and even summer science camps. All related software comes pre-loaded on your Lab's student laptops.



▲ NAO Choregraphe
◀ K'Nex Computer Control

NAO Robot

The fully programmable **NAO** humanoid robot sparks imagination and engagement with students like few other tools. Through trial and error, and teamwork, students learn simple to complex coding that brings the robot "to life." Beginners learn using **NAO's** own software suite, called **Choregraphe**, which offers an intuitive "drag and drop" interface, while advanced students can use **C++** and **Python** to program the robot. Make him talk, walk, respond to commands, ask and answer questions, and even dance.



exposure to STEM related disciplines while generating as much enthusiasm from students.

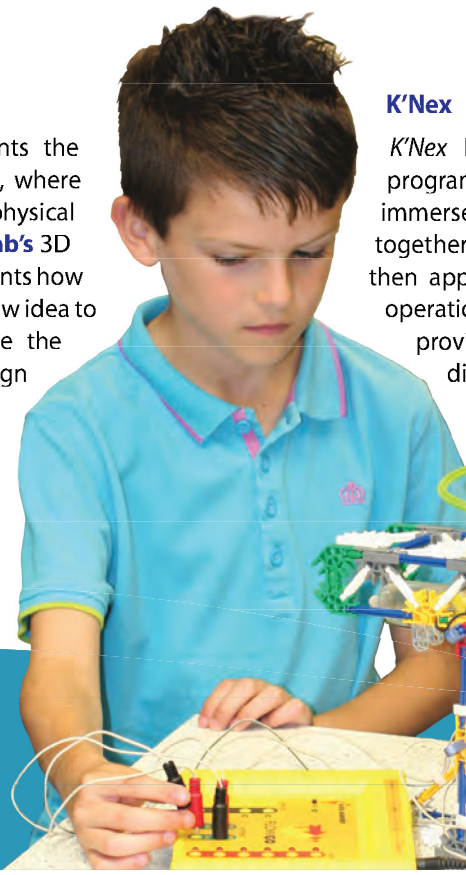
Zspace

Zspace is a desktop-based, 3D virtual reality learning platform that allows students to immerse themselves within the worlds of science in an experiential way never before possible. Through the use of special software and *Zspace* glasses and stylus, students can see and manipulate life-like 3D models that support the study of biology, anatomy, physics and much more. In addition to providing a captivating experience that brings depth to the learning process, the use of *Zspace* is safer and less expensive than using physical equipment or cadaver animals, thereby making a wider range of subjects accessible within the classroom environment.



3D Printing

The popular Maker Movement represents the intersection of creativity and technology, where STEM (and STEAM) disciplines enable the physical creation of tangible objects. **A+ STEM Lab's** 3D design and printing solution teaches students how to design, plan and build a product from raw idea to finished item, encouraging them to see the direct connection between abstract design and concrete end products. For students interested in industrial technology to engineering, art to architecture, exposure to 3D printing helps develop the very same skills these students will need in future careers.



K'Nex

K'Nex kits integrate mechanics, physics, and simple programming into fun and challenging activities that immerse students in hands-on learning. Students work together to create moving, motor-assisted *K'Nex* creations, then apply programming logic to control the structures' operation through a software interface. Few activities provide such a broad exposure to STEM related disciplines while generating as much enthusiasm from students.





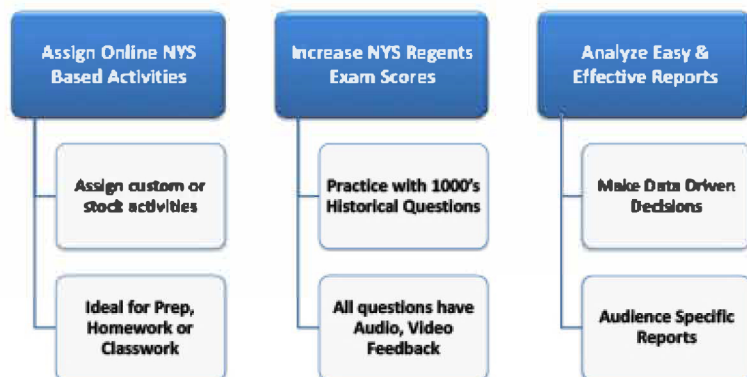
A+**STEAM** LAB FOR College Readiness



The A+ STEM Labs College Readiness Experience

The A+STEM Lab for College Readiness is a complete teacher's command center that enables teachers and students to make the most productive and efficient use of personal laptops or tablets in the classroom, while helping to teach and reinforce post-secondary focus.

The A+STEM Lab for College Readiness provides the teacher with a set of easy to use tools to effectively Monitor, Guide and Control all student computer usage and push content to individual students or an entire classroom. All A+STEM Labs for College Readiness integrate a range of presentation tools found in the highest tech classroom settings creating a turnkey, multi-media learning environment.



STEM Lab Includes:

The Intelligent Laptop Cart

Windows or Mac Operating System

Up to 30 Student Computing Devices:
Laptops, N books, or Convertibles

Connect to Interactive Whiteboards and Projector

Classroom Management Tools!

- Monitor & Control
- Teacher Screen Broadcasting
- Online Web Surfing Control
- Group Collaboration
- Differentiated Learning

Assign Online Based Activities HANDS On Science Experiments

- Increase # of Students Qualifying for the NYS Regents through Lab Completion
- Increase NYS Regents Exam Scores
- Increase SAT Exam Scores

Analyze Easy & Effective Reports

- Teacher Screen Broadcasting

Video & Audio Streaming

- Student Demonstration
- File Transfer & Distribution
- Manage Tests & Quizzes
- Group Collaboration

The College Readiness Options:

- LearnerPal NYS Regents Test Prep
- Mind Molders SAT Test Prep
- NYS Regents Recovery Labs



A+ STEAM LAB FOR College Readiness



A+ STEM Labs for College Readiness

The A+STEM Lab for College Readiness includes a combined package of Instructional digital support platforms with Learner Pal's NYS Regents and Mind Molder's SAT Test Prep. Through both platforms' teachers can assign online activities or courses to their students. Activities can include practice questions, flashcards with test focused vocabulary, assessments, hyperlinks, videos, and documents. Teachers can select from pre-made activities and courses to simply assign to their students or collaborate to create and share their own courses within their department. Teachers and Administrators can view reporting analytics to identify areas of needed improvement and make informed data driven decisions.

These unique, interactive digital platforms combine critical thinking strategies with powerful literacy techniques. Students have benefited from using these strategies to increase their cognitive development as well as their NYS Regents and SAT scores. The STEM Lab for College Readiness Integrates with these digital programs to provide schools with a turn-key solution that drives results.



Content and Assessment

LearnerPal is an easy-to-use, content and assessment platform. Convenient way for teachers to assess students and for students to keep track of their progress.



Multilingual Translation

LearnerPal's Multilingual translator allows students and teachers to select and view all content in their language of choice.



NYS Regents Prep

All courses have questions by category with full audio explanations, flash cards, random quizzes and much more. Proven to improve test scores!



SAT Test Prep

Opening College doors by improving SAT/ACT scores. The SAT/ACT program is a blended learning program that can be practiced in class or in the comfort of your own home.

How the SAT Program Works

Additionally, the SAT Program is a blended learning program that can be practiced either in class or in the comfort of a student's home. The program consists of a 32hour course separated into core levels. The course curriculum is broken down into various practice hours based on school and student needs, the site content, as well as Online support. All levels consist of math, reading, writing and vocabulary strategies most commonly found on the SAT exams along with two full diagnostics.



A+ STEAM LAB FOR LITERACY

Easy to Use, Easy to Set Up, Easy to Control!

The **A+ STEAM Lab for Literacy** is a complete teacher's command center that enables teachers and students to make the most productive and efficient use of personal laptops or tablets in the classroom, while helping to teach and reinforce basic reading principles. The A+ STEAM Lab for Literacy provides the teacher with a set of easy-to-use tools to effectively **Monitor, Guide and Control** all student computer usage, and push content to individual students and/or the entire classroom.

All **A+ STEAM** Labs for Literacy integrate a range of presentation equipment found in the highest tech classroom settings creating a turn-key multi-media learning environment.



MONITOR

GUIDE

CONTROL



STEAM Lab Includes:

The Intelligent Laptop Cart

Windows or Mac Operating System

Up to 30 Student Computing Devices:

- Laptops, Netbooks, or Convertibles

Connect to Interactive Whiteboards and Projector

Classroom Management Tools:

- Monitor & Control
- Screen Blanking
- Teacher Screen Broadcasting
- Video & Audio Streaming
- Student Demonstration
- File Transfer & Distribution
- Manage Tests & Quizzes
- Group Collaboration

Literacy Software Options:

- Reading Plus
- Maxscholar

Other Benefits You'd Like to Know

The **Intelligent Laptop Cart** also provides a perfect platform for any computer-based educational program, such as:

- CBT/Online Testing - STEAM Applications
- Computer Control and Programming
- Robotics
- Maker Education/3D Printing
- CAD/CAM Reading Intervention
- Web/Game Design
- Security Applications
- And much more...



A+ STEAM Lab for Literacy includes Reading Plus®, the leading national web-based silent reading intervention program that changes the way students read. **A+ STEM** has partnered with Reading Plus® for its breakthrough software that is aligned with the NYS common core standards and has helped thousands of elementary, middle and high school students reach grade level proficiency in reading. Reading Plus® assesses and differentiates students strengths and weaknesses. It assigns and dynamically adjusts training components to improve visual skills, vocabulary development, silent reading fluency and comprehension. The motivation to read is encouraged and supported through gaming features and 1st grade through college level text.



Assessment

-  COGNITIVE
-  PHYSICAL
-  EMOTIONAL



Instruction



Progress Monitoring



A+ STEAM Lab for Literacy also uses Maxscholar.

The most comprehensive solution on the market that incorporates multi-sensory, phonics, reading and language-based programs. In addition to general education, **Maxscholar** is specifically designed to help students who have Dyslexia, learning disabilities, ADHD, processing problems, or who are struggling to learn to read.

Maxscholar programs use the proven research methods of the Orton-Gillingham approach, the Lindamood-Bell Process®, and other top phonics and reading comprehension strategies. The programs are fully adaptable to students Pre-K through college. **A+ STEM Labs** with Maxscholar are custom tailored for students with and without learning disabilities so you can rest assured your students are equipped with the best.



MAXSCHOLAR
Reading Intervention Programs



Introducing:

PRE-K STEM LAB

By A+ STEM Labs

Bringing STEM Education To Your School Has Never Been Easier, Or More Affordable!

A+ STEM Labs believes that hands-on learning makes for memorable learning and greater retention of concepts. Our labs encourage students to act like "real scientists" by participating in interactive experiments designed for the Pre-K Level, while giving teachers the ability to monitor, guide and control student activity.

The **Pre-K STEM Labs** integrate with a range of presentation technology such as a document camera, a sound system, wireless tablets and connection to an interactive white board, all to promote a dynamic and fun learning experience.

PRE-K STEM LAB INCLUDES:

Probes



Laptops with
ABCmouse Software



VU Data Loggers



Experiments You Can Try:

*Does light shine through everything?
Use light sensors to see how well light travels through different objects.*

*What makes the most noise?
Use sound sensors to measure changes in sound levels from different noises.*

*What happens when we exercise?
Use temperature and heart rate sensors to measure changes in pulse and temperature after a vigorous activity.*



Benefits Of The Pre - K STEM Lab:

- Easy-to-use touchscreen laptops ensure each child is given personalized tools.
- Built-in software tracks progress of each child, giving virtual rewards for milestones that are reached.
- Data loggers and science probes for hands on activities that make every child feel like a scientist conducting real, age appropriate experiments.
- Automated data sharing and management with the students devices.
- Mobile STEM Lab serves as a Teaching Command Center that enables more efficient use of the technology in classrooms.





ABCmouse®
FOR SCHOOLS



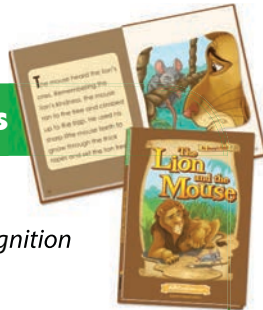
A+ STEM Labs integrates the step-by-step learning curriculum of **ABCMouse® for Schools** in a program designed with more than **650 lessons** in eight available levels. As a child completes each lesson, he or she is guided to the next one and is motivated to continue learning by a gratifying tickets and rewards system.

Reading And Language Arts

The Reading Curriculum Includes:

- Uppercase and lowercase letter recognition
- Phonics
- Rhyming words and word families
- More than 450 books and beginning readers
- Sentence structure
- Parts of speech

Creating the foundation for essential reading comprehension



Math

The Math Curriculum Includes:

- Recognizing and counting numbers 1–120
- The base ten system
- Place value
- Addition and subtraction
- Names and attributes of 2D and 3D shapes
- Length, time, and money measurement

Giving children fundamental building blocks for critical thinking



The World Around Us

The World Around Us Curriculum Includes:

- The body and health
- Plants and animals
- Weather, climate, and the seasons
- Earth's environments
- Maps
- Regions of the United States

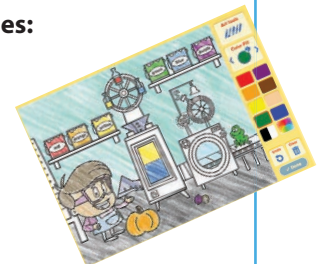
Making children aware of their history and environment



Art & Colors

The Art & Colors Curriculum Includes:

- Primary and secondary colors
- Shades of colors
- Paint-by-number activities
- Number and letter dot-to-dots



Infusing a rainbow of colors into children's minds



Funding Sources

Let our team of committed professionals work with you on funding and procurement options. We've worked closely with *New York City Public Schools* to find full or partial funding for over 500 labs throughout the city. Let's see what we can do for you.

Our labs are also available for procurement through state purchasing contracts, as well as the **PEPPM Technology Bidding and Purchasing Program**, which is honored by almost all 50 states.

Contact us to learn more:

A+ STEM LABS

1490 North Clinton Avenue
Bay Shore, NY 11706
Tel: 631.969.2605



making **STEM** achievable

