



Three Year Technology Implementation Plan 2017 – 2018 – 2019

Information Services – Instructional Technology – Technology Services

FCS Technology...Exceptional Service, Innovation, and Excellence



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Vision for Technology Use

Forsyth County Schools (FCS) mission, vision, strategic plan, and learner profile guide the work of all employees. Forsyth County Schools Technology Department uses these items as a foundation for leveraging technology to increase learning. The mission for the Technology Department is to leverage technology for all to increase student learning.

FCS Vision

Quality Learning and Superior Performance for All

FCS Mission Statement

The mission of the Forsyth County Schools is to prepare and inspire all students to contribute and excel.

District Strategic Plan

- *Instruction: Fulfill the expectations of the Learner Profile.*
- *Human Resources: Ensure a highly effective workforce*
- *Facility and Strategic Services: Provide safe and secure facilities that support the needs of student, staff and programs*
- *Technology Services: Leverage technology for all to increase student learning*
- *Operational Services: Deliver high quality services that maximize available resources.*

FCS Learner Profile

- *Pursue Continuous Learning*
- *Exhibit Strong Personal Qualities*
- *Utilize Creative and Critical Thinking*
- *Engage and Contribute*
- *Interact Effectively.*



Forsyth County Schools will leverage technology to support the Learner Profile and all system level initiatives. Technology will be utilized by students and adults to produce quality work; to create an environment of excellence; to create a school district that is safe, caring, and responsive to stakeholders needs; and to create an environment that meets the challenges of a modern society. The school district will display a belief that technology is imperative to the work of students and adults and will provide the resources necessary for an effective and efficient operation to achieve results.

As indicated in the strategic plan, technology should be used to increase student learning. Forsyth County Schools sees the development of the following five areas as being critical to the realization of the vision and mission, and to support the strategic plan and the learner profile. All five items outlined below will be in support of the Teaching & Learning department to leverage technology with teachers and students:

1. The Learning Commons

Forsyth County Schools will develop a learning commons that makes accessible all of the digital and physical resources of the district and becomes the instructional hub of the district. This will be accomplished by developing a virtual learning commons, which will provide 24/7 access to all digital resources through a single, easy-to-navigate, single sign-on portal to streamline access for students and teachers. Concurrently, the Forsyth County Schools will develop a physical learning commons at each school, which will serve as the instructional hub, collaborative work area, and access point for relevant physical instructional materials.

2. Personalized and Differentiated Instruction

Forsyth County Schools will provide teachers with formative assessment tools which will foster personalized and differentiated instruction for students, teachers, and administrators. Formative assessment tools will be embedded in the district's learning management system and available through the virtual learning commons. These tools will be linked to all instructional resources through the virtual learning commons so that the instructional and professional development needs of the district can be customized for each learner and provided in a timely manner.



3. Fostering the “Six C’s”

Forsyth County Schools will provide digital resources and professional development which promote character through honesty, self-regulation, and empathy; citizenship through sensitivity and respect for other cultures and active engagement in all cultures through service; critical thinking and problem solving in authentic contexts; effective communication using a diverse set of media in a variety of contexts including small, large, and diverse groups; effective collaboration in order to reach a common goal with a diverse group of people; and creativity and innovation to meet the challenges of a modern society.

4. Relevant and Innovative Professional Development

Forsyth County Schools will develop and use a wide variety of digital tools in instructional techniques to provide professional development that fosters the effective integration of technology into the classroom while expanding the boundaries of the classroom to more closely align with 21st century norms and expectations of instruction. Professional development will be delivered in a way that produces immediate results and use in the classroom.

5. Transformational Model of Blended Learning

As our society becomes increasingly connected in the 21st century, it is imperative that the students of Forsyth County Schools achieve fluency in a variety of instructional contexts. These contexts range from a fully “brick and mortar” experience to a fully multi-dimensional experience.



Description of Digital Learning Curriculum

Extended Learning	Blended Learning	Hybrid Learning	Virtual Learning	Personalized Learning
<ul style="list-style-type: none">• Brick & Mortar Support• Accessing digital content to extend learning and expand the learning space	<ul style="list-style-type: none">• Integration of F2F and Online Learning• Incorporating both forms of instruction to develop learning communities	<ul style="list-style-type: none">• F2F and Online Courses• Scheduling both learning formats (Mastery-based credit recovery for example)	<ul style="list-style-type: none">• Completely Online Education• Providing virtual learning -Asynchronous with some synchronous experiences offered.	<ul style="list-style-type: none">• Individualized Online Education• Automating instruction based on a student's learning needs and preferences.

Extended Learning. The district has used a learning management system (LMS) as the infrastructure for digital learning since 2002. FCS will use itslearning (ITSL) for all grade levels in its brick and mortar school buildings. Students will access digital content within the LMS from home or school to support learning within the face-to-face classroom. This practice extends learning opportunities beyond the school environment.

Blended Learning. FCS is the first major school system in the southeast to adopt a blended learning approach system-wide. Teachers and students use a suite of tools to develop collaborative learning communities with itslearning being the hub of the blended learning environment. The teachers take advantage of this platform to organize units of inquiry mapped to standards; teachers also present content, communicate with students, and develop assessments. Students utilize their own devices to access this system to communicate with each other, complete assignments collaboratively and individually, and post their original work.



Hybrid Learning. Some FCS students are enrolled within face-to-face schools but complete online classes for part of the regular school day. FCS uses Apex Learning, Georgia Virtual School and Forsyth Virtual Academy for hybrid learning. Some reasons for this hybrid enrollment are due to credit recovery, scheduling, and expanding course options. [Click here to learn more about Georgia Virtual School classes.](#)

<http://www.gavirtualschool.org/>

Virtual Learning. In 2010, FCS opened Forsyth Virtual Academy. This school is Georgia's first full-time online school operated by a public-school district that offers a high school diploma. FCS employs and trains its own teachers for this virtual school. Forsyth Virtual Academy is open for students in grades 6-12. This school offers students the opportunity to engage in a digital learning environment to achieve their individual potential through innovative, flexible, socially-connected, and student-focused education.

Personalized Learning. FCS was selected by the U.S. Department of Education as one of 49 grantees for a 2010 Investing in Innovation Fund (i3) grant. FCS was the only recipient in Georgia and one of twelve public school districts in the nation to be a grantee. The grant sought to create a transformational system to overcome the current paradigm of silos of data, replacing it over time with a fully integrated system, to include standards-based learner plans and a content management system where activities and resources are matched to students' current performance level and individual learner characteristics. The resulting system is a user interface that engages learners as well as teachers, leaders, and parents. Although the grant has concluded, FCS continues to use the platform and has now shifted the focus from developing the system itself to align teaching and learning with technology.



Current Technology Reality

Forsyth County Schools Technology Services Department plans, implements, and supports all of the school district's technology initiatives and infrastructure. Careful collaboration with all stakeholders helps ensure that district technology needs are met in the most effective and efficient manner and that Forsyth remains a leader in leveraging technology to enhance teaching and learning.

Technology Services is committed to providing teachers and students with the best technology available. We see ourselves as an integral part of the learning process, and it is our pleasure to serve the teachers, students, and staff in Forsyth County. We believe technology in schools increases student productivity in and outside the classroom, encourages individual leadership in learning, expands access to learning resources, and helps develop digital citizenship within a structured environment.

As leaders in technology we must always look at how we can improve our relationship with our stakeholders and provide them with exceptional service and new ways to challenge the norms of what is possible.

Technology Services supports:

27,000+ Chromebooks for Students

5,000+ Laptops for Teacher

360+ Physical and Virtual Servers

1,800+ Wireless Access Points

84,000+ Unique Wireless Clients per Day (57,000 BYOT and 27,000 Chromebooks)

1,300+ Network Switches

2 Enterprise-grade Firewalls capable of processing up to 200 Gbps throughput

1 Petabyte of raw mass storage

20 Hyper-converged nodes operating in a stretched cluster



Each school is assigned an instructional technology support team which includes an Instructional Technology Specialist and a Media Specialist or Media Paraprofessional. Both have experience using a wide variety software and hardware as a classroom teacher and in preparing and conducting technology-related professional learning classes. This team is innovative in the way they integrate technology to enhance the educational process. Both members of the team are leaders in the building and in the district. The school-based Instructional Technology Team serves as the conduit for planning, communicating and achieving district initiatives and often is part of the school's leadership team. They oversee the use of multimedia equipment such as scanners and projectors as well as instructional equipment such as student response systems, digital microscopes and document cameras; provide technology support for the computers in the school as well as manage access to software, the Internet and other network resources such as streaming video. Every classroom in the district has ten Chromebooks with Lock n Charge carts connected to the Internet. Each permanent classroom is outfitted with an interactive board and sound system.



Staffing

The district's Technology department is broken into three areas: Instructional Technology, Information Systems, and Technology Services. Each department's staff is outline below. A full organizational chart for the Technology Department can be located in Appendix A.

Information Systems

Director of Information Systems, Registrar (4), International Registrar, Students Information Specialists (4), Platform Support Specialist, Student Information Systems Assistant.

Instructional Technology

Director of Instructional Technology & Media, Coordinator of Instructional Technology, ITS on Special Assignment (2), Media Specialist on Special Assignment, Instructional Technology Assistant.

Technology Services

Director of Technology Services, Network Operations Coordinator, Network Operations Engineer, Network Operations Administrators (3), Technology Integration Coordinator, Warehouse Manager, Project Manager, Technical Assistant Specialist, Lead Tech, Technical Support Specialist (8), Contractor (9).



Software

Teachers have a wide variety of software applications to assist in the teaching and learning of students to increase the creation of engaging lessons that impact student achievement. The Microsoft Office Professional suite is installed on every classroom desktop, student laptop and teacher laptop. Also, Office 365 and Google Apps for Education are available to student and teachers.

Additional district supported software includes ActivInspire, Audacity, Frames (Elementary & Middle School), and Geometer's Sketchpad (Middle and High School).

Digital Content and Learning Tools

Various software application is available to students and parents. Teachers and administrators have access to the student information system, Infinite Campus, where electronic records and student data are housed, and an electronic grade book is also integrated into the SIS package. Teachers are required to post grades to the Internet via this system for parental access. Learning Station is a web-based student assessment platform which is provided to teachers grades K-12 and offers online and offline assessment. This program enables the district and teachers to track student performance on teacher-created and district-wide assessments. Additionally, the platform allows for item banks, including items and relevant metadata, to be distributed throughout the district. This testing and reporting solution gives the district's teachers and administrators the information they need to help improve instruction and student performance.

Teachers maintain courses within itslearning, an online learning management system that provides opportunities for synchronous and asynchronous learning. Within itslearning, teachers publish student assignments; schedule class events in a planner; post links for research activities; develop discussion forums; post lessons; and communicate with students via email. Teachers also collaborate in common grade level, subject, and course groups with itslearning. itslearning also boasts a robust digital content library that is searchable by standard. Items in the digital content library can be added by teachers and district level content specialists, and may include digital content purchased in common cartridge format. All items include relevant metadata to allow for flexible searching to take place within the platform. Finally, itslearning contains a recommendation engine that receives data from assignments, tests, observations, and the district's assessment engine (Learning Station) to suggest resources and activities for



standards where students are deficient. itslearning is the main source of communication between teachers, students, and parents.

Forsyth County Schools also provides a host of digital materials to students and teachers. Below is a sample of the various digital applications available in the district.

- BrainPop: animated, curriculum-based electronic content that is fully compatible with interactive whiteboards, projectors, and mobile devices.
- Destiny One Search & PebbleGo: student-friendly search engines that allow for personalized and productive learning experiences. Pebble Go is specifically designed for elementary students.
- Safari Montage: our digital media management and distribution system. Safari montage also hosts content including streaming video and learning objects, some of which are subscription services.
- Soundzabound: houses a wide variety of copyright compliant music, audio themes and sound effects for grades K-12. The music can be legally used in podcasts, presentations, videos, news shows, digital storytelling, TV broadcasts, and web design.
- Voicethread: a web-based platform that enables teachers and students to upload images, video, or documents, record audio, video, or text comments, and then invite others to record comments as well.
- Wixie: web authoring tools for elementary students to display their knowledge.

Various research tools are available for students to conduct scholarly research. These tools include: GALILEO, GALE, World Almanac Online, and the World Almanac for Kids Online. The Technology Department provides access for students and teachers to a number of authoring and skill building tools as well including Code.org, EduBlogs and Typing.com.

Digital content and curriculum are available to teachers and students from a number of sources, free and subscription based, including CK-12 Discovery Education, HMH Journeys and Collections, Khan Academy, and Pearson Envision Math.



All web-based resources provided by the district are accessible within ClassLink, a single sign-on portal that aggregates all district and school-based digital applications and resources using protocols such as OAuth, LTI, ADFS/SAML and password vaulting.

A complete listing of digital resources can be located in Appendix B and at <http://www.forsyth.k12.ga.us/Page/49222>.

Instructional/Administrator Uses

In each school, all teachers and administrators are provided equal access to technology resources and technology services. Equivalent hardware, software applications, and training are provided to every school. Within each classroom, the following technology devices are available: an interactive whiteboard that is connected to the teacher's laptop computer and a projector; 10 Chromebooks; and a sound system. Within each school, additional technology resources are also available for instruction including the following: Chromebooks, digital cameras, digital microscopes, document cameras, student response systems, and a broadcast system.

Level of Use

Observations are conducted to determine the level of technology integration occurring at each school. These observations assist school administrators in making better decisions concerning professional development to ensure that teachers are creating 21st century classrooms. In addition to these walk-throughs, the district has created an online instrument to assist administrators in recording teacher observations to ensure quality teaching, alignment to district initiatives, and standards-based classrooms.



Parent/Community Use

Parents can view grades, homework assignments, progress reports, and other information provided by teachers via the Internet. Families without a computer at home are encouraged to use the computers in the local library or make use of the school's media center computers. Over 25,000 parents are registered for the online student information system's ParentPortal within Infinite Campus. Parents are also able to replenish lunch money, receive alerts and school notices, and access bus routes and transportation pick up times via the Internet. Middle and High School students have Portal accounts as well and can view their own progress at home, or at school in cases where home Internet connection is not available. Advisors or counselors can work with students, viewing their assignments and performance. In addition, Forsyth County Schools has partnered with Comcast to provide Comcast Internet Essentials which provides a low-cost home Internet connection to students receiving free lunch.

District technology resources at home are accessible to students through ClassLink, which enables them to access their documents and files as well as all other district resources. Software platforms such as Office 365 and Google Apps for Education are also available anytime/anywhere. Wireless arrays have been installed within each school, and the district has implemented a Bring Your Own Technology (BYOT) initiative to encourage students to bring their own personal technology devices from home to access district network resources in order to facilitate instruction.

Student & Teacher Use

All technology use by employees and students is guided by the Responsible Use Guidelines for Students and Staff members. Please visit the following website to view Responsible Use Guidelines <http://www.forsyth.k12.ga.us/Page/40831>. Additionally, all employees of Forsyth County Schools are expected to comply with Expected Communication Guidelines found at <http://www.forsyth.k12.ga.us/page/544>.



Communication

Communication and Marketing

The Forsyth County Schools three-year technology plan will be posted on the school system website. Additionally, the plan will be shared with administrators, Instructional Technology Specialists, and Media Specialists.

Integration and Coordination with Long Range Planning Initiatives

Forsyth County Schools has guided its work via a strategic plan process since 1995. Technology planning has been an integral part of strategic improvement in the district throughout that time. This technology plan is reflection of that process.

Meetings are scheduled on a regular basis between the technology department, system level professional development staff, curriculum, media, Title 1, special education, and ESOL personnel to coordinate the implementation of the strategic plan (including technology initiatives).



Professional Development

Forsyth County Schools adheres to a job embedded approach for high quality professional learning, implemented on district wide Early Release Days, to help standards-based practices become a reality in all Forsyth County classrooms.

Schools submit a professional learning plan each year aligned to their school improvement goals and these plans are reviewed by Curriculum, Title 1, Professional Learning, Technology, Special Education, and ESOL personnel to ensure fit with district as well as school goals. View the school improvement plans at <http://www.forsyth.k12.ga.us/Page/41330>.

In addition, the Department of Instructional Technology leads professional learning initiatives in the areas of:

- ISTE Standards for Technology Coaches
- Online, Blended, and Personalized Learning
- Technology Integration Matrix (TIM)

Identification of Classroom Implementation

Forsyth County Schools use the ISTE Standards for Technology Coaches (ISTE Standards-C) as a basis for training and guiding the work of our local school instructional technology specialists. Instructional Technology Specialists collaborate with district staff and peers to unpack the ISTE Standards-C to determine strengths and weaknesses for themselves and their schools. ISTE Standards-C provide standards, attributes, and exemplars for the following topics:

- Visionary leadership
- Teaching, learning and assessments
- Digital age learning environments
- Professional development and program evaluation
- Digital citizenship
- Content knowledge and professional growth



The Technology department seeks to extend the work started with the Investing in Innovation (i3) grant awarded to the district in 2010 by focusing on the areas of online, blended, and personalized learning. Monthly trainings occur in these three areas at each school by district Instructional Technology Specialists. Additionally, summer trainings and the Georgia Online Endorsement class is offered to teachers on a regular basis.

In subsequent years, the TIM Matrix will be introduced to instructional technology specialists and media specialists as a basis for measuring the level of technology integration. The TIM matrix is used to enhance learning for k-12 students by incorporating five interdependent characteristics of learning environments (active, collaborative, constructive, authentic and goal-directed) with levels of technology use (entry, adoption, adaptation, infusion, transformation). Forsyth County Schools seeks to establish the TIM Matrix as common language throughout the district when measuring levels of technology use.



Internet Safety Plan & Digital Citizenship

Background Information

In 2008, Congress passed the Protecting Children in the 21st Century Act. The FCC sought comment on specific sections of this act, specifically as it relates to the E-rate program. As a result, the FCC has released an order to define what a schools' CIPA policy must include.

In addition to the CIPA certifications required of schools, the Protecting the Children in the 21st Century Act requires the school, school board, local educational agency, or other authority with responsibility for administration of the school to certify that, "as part of its Internet safety policy, [it] is educating minors about appropriate online behavior, including interacting with other individuals on social networking websites and in chat rooms and cyberbullying awareness and response."

The FCC declined to define or interpret the terms provided in the statutory language, such as "social networking" or "cyberbullying." In addition, the FCC does not detail specific procedures or curriculum for schools to use in educating students about appropriate online behavior because "these are determinations that are better to be made by schools implementing the policy in the first instance."

Procedure for Local Schools

Beginning in the fall of 2011, each school in Forsyth County Schools submitted an Internet Safety Plan. Each school updates their plan each year. Plans are due to the Office of Instructional Technology by November 30th of each year.



Procedure for the Department of Instructional Technology

The Director of Instructional Technology maintains electronic archives of all submitted plans. Archives are maintained for a period of seven years.

The Director of Instructional Technology reports to the Chief Technology and Information Officer the status of schools' Internet Safety Plans. The Director of Instructional Technology maintains samples and online resources available to schools in the development of the plan.

Digital Citizenship

Students must be well rounded digital citizens to meet the attributes of the Learner Profile. The Technology Department provides various resources to schools to ensure students are provided the necessary tools to exhibit digital citizenship skills.



New Technologies and Initiatives

Data Analytics Engine

Forsyth County Schools seeks to provide teachers, administrators and students with actionable, current, and relevant data. As a result, the district seeks to establish a data analytic engine that will combine data from number of sources into one system. This system will allow district staff to create reports that will produce predictive analytics. Such analytics will allow the system to identify trends, forecast academic projections and answer questions about future student performance that were previously not possible to answer.

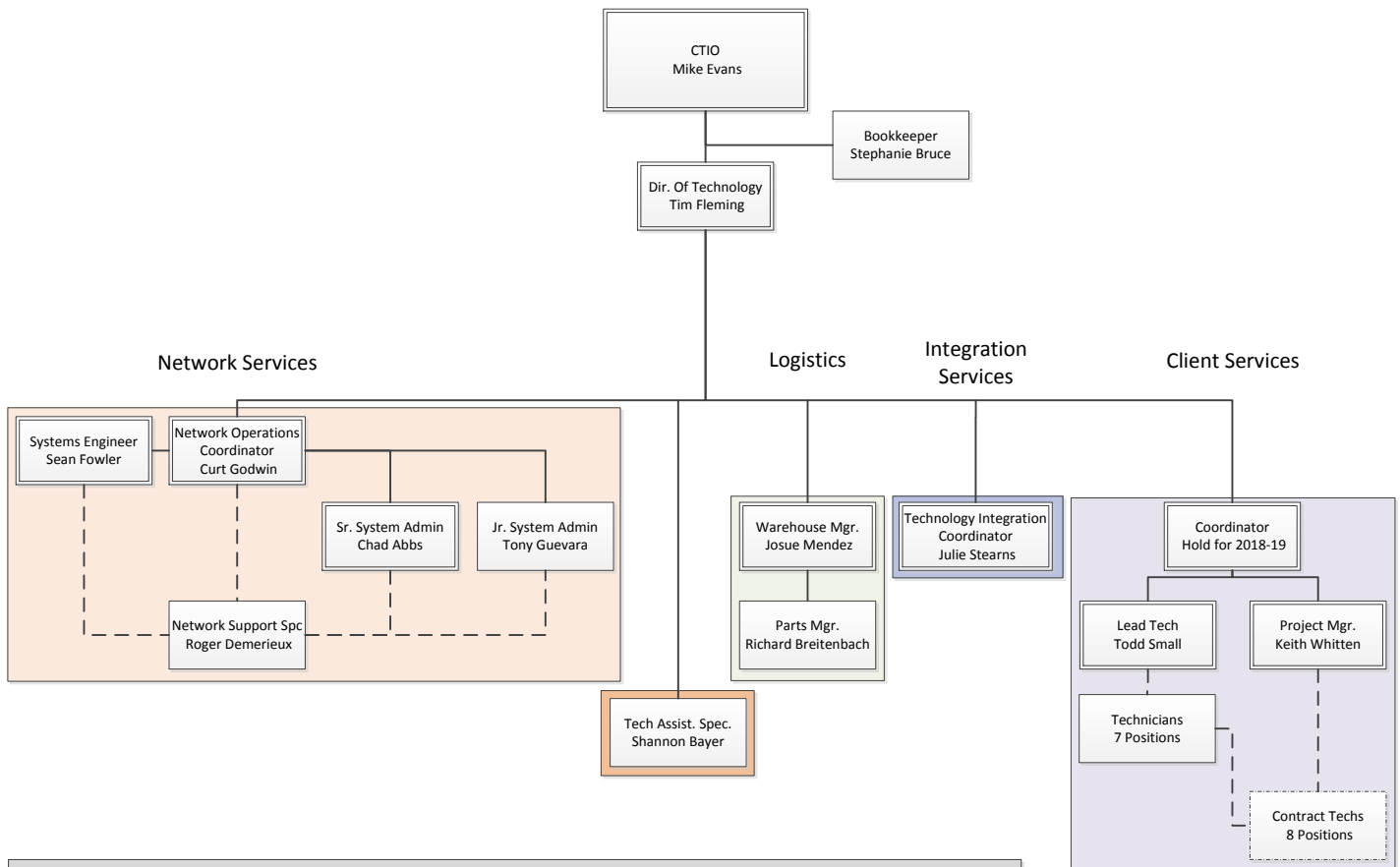
Personalized Learning

A committee of district and school level representatives are currently working to establish a plan to bring Personalized Learning across the district. Thus far, the committee has identified four focus areas including Student Ownership, Passions and Interest, Social and Emotional Learning, and Mastery Based Education. The technology department will work closely with this committee and the Teaching & Learning department to support Personalized Learning with technology.



Appendix A - Organizational Chart

Technology Services





Technicians: Ben Bryan, George Combes, Marilyn Funke, Armando Gonzalez, Jim Lorusso, Thomas Shortnacy, David Soto

Contract Technicians: Rob Chavous, Kevin Jackson, Albert John, Chris Koller, Efrain Ledesma, Matt Miller, Sam Ray, Chris Walker, Kenneth Watkins



Appendix B - Digital Resource List

<div>FORSYTH COUNTY SCHOOLS DIGITAL RESOURCES 2016–2017<div></div></div>		
ELEMENTARY SCHOOLS <ul style="list-style-type: none"><input type="checkbox"/> BrainPop Jr.<input type="checkbox"/> Culture Grams<input type="checkbox"/> Frames<input type="checkbox"/> HMH Journeys<input type="checkbox"/> Pebble Go!<input type="checkbox"/> StemScopes<input type="checkbox"/> Studies Weekly<input type="checkbox"/> The World Almanac for Kids<input type="checkbox"/> Wixie	ALL SCHOOLS <ul style="list-style-type: none"><input type="checkbox"/> BrainPop<input type="checkbox"/> BrainPop ESL<input type="checkbox"/> CK-12<input type="checkbox"/> ClassFlow<input type="checkbox"/> Code.org<input type="checkbox"/> Desmos Graphing Calculator<input type="checkbox"/> Destiny<input type="checkbox"/> Discovery Education<input type="checkbox"/> EduBlogs<input type="checkbox"/> GALILEO<input type="checkbox"/> GALILEO for Kids<input type="checkbox"/> Google Apps for Education (Docs, Drive, Sheets, Slides, etc.)<input type="checkbox"/> Itslearning<input type="checkbox"/> Learning Station<input type="checkbox"/> Khan Academy<input type="checkbox"/> Moby Max<input type="checkbox"/> Myhrw.com<input type="checkbox"/> Pearson Envision Math<input type="checkbox"/> Safari Montage<input type="checkbox"/> Soundzabound<input type="checkbox"/> The World Almanac Online<input type="checkbox"/> Typing.com<input type="checkbox"/> Voicethread	HIGH SCHOOLS <ul style="list-style-type: none"><input type="checkbox"/> APEX Learning<input type="checkbox"/> GALE (Opposing Viewpoints)<input type="checkbox"/> Cengage<input type="checkbox"/> HMH Collections<input type="checkbox"/> Kuta<input type="checkbox"/> Rosen Digital Literacy<input type="checkbox"/> TI-Graphing Calculator Software<input type="checkbox"/> USA Test Prep <ul style="list-style-type: none">• This list does not include software purchased by individual schools.