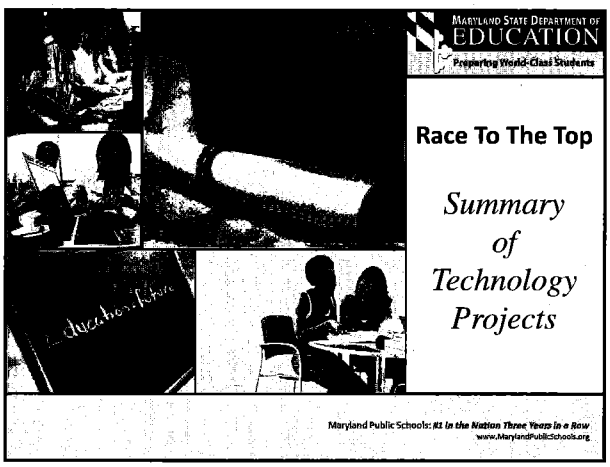

Maryland State Department of Education
Preparing World-Class Students

Race To The Top

Summary of Technology Projects

Maryland Public Schools: *#1 in the Nation Three Years in a Row*
www.MarylandPublicSchools.org

Technology Projects Overview

- There are 28 technology related projects
  - *16 projects, led by the Division of Accountability & Assessment were the focus of the September presentation to the State Board*
  - *12 projects, led by the Division for Academic Reform and Innovation, are the focus of today's presentation*
- Projects have completed their planning phase and are now progressing into their implementation phase
- Projects are scheduled for phased implementation starting the Spring of 2011 and onwards

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Curriculum and Formative Assessment Development
(Project 04 | 03)

Project Overview	Major Deliverables	Impact
❖ Project to revise the current State Curriculum, build formative assessments, and provide professional development to support teachers in their implementation of the Common Core Standards.	❖ Procurement and installation of eight online STEM courses for high school students. ❖ Revision of the State curriculum for the transition to the Common Core Standards. ❖ Evaluation of current electronic resources from the Maryland curricular toolkit for alignment. ❖ Development of formative assessments, acquire resources for the toolkit, and assist in providing professional development.	❖ Online curriculum resources will be reevaluated and additional resources sought to support implementation of the Common Core Standards. ❖ Maryland students to be prepared for credit-bearing courses in college or the workforce.

3

Curriculum and Formative Assessment Development for ITEEA (Project 05 | 04)

Project Overview	Major Deliverables	Impact
❖ Project to increase students' technological literacy by adopting International Technology and Engineering Educators Association (ITEEA) standards aligned to the common core. ❖ Project will also develop model course guides and end-of-course assessments from the STEM Center for Teacher and Learning (STEM-CTL).	❖ Highly rigorous, technology education programs aligned to the common core. ❖ Instructional materials and model course guides created by the ITEEA. ❖ Standards-based, end-of-course assessments to support instruction and assess students' technological literacy. ❖ Professional development aligned to the Maryland Professional Development Standards.	❖ Enables each student in Maryland to complete one credit of technology education prior to graduation. ❖ Provides standards-based, end-of-course assessments to help identify needs for teacher professional development.

4

Develop and Implement State Curriculum Management System (Project 14|31)

Project Overview

- Project to deploy a standardized Curriculum Management System (CMS) that facilitates instructional and assessment alignment, design tools, lesson plans, and course syllabi to help teachers develop courses that are common core aligned.

Major Deliverables

- Product selection through the State's standard procurement process.
- Installation and configuration of the application within a consolidated RTTT technology environment.
- Piloting with early adopters in LEAs.
- Statewide deployment for use by all LEAs.

Impact

- Provides an online Toolkits for teachers.
- Centralized system that is shared by all LEAs.
- Extensive import and export capabilities
- Interoperable with the other proposed instructional improvement systems as well as the Maryland Longitudinal Data System.

5

Expand Instructional Toolkit (Project 15|07)

Project Overview

- Project to develop multi-media rich instructional resources to expand the instructional toolkit. Project will include meta-tagging instructional resources within the standardized curriculum management system.

Major Deliverables

- Development of four online PD courses to support the new curriculum.
- Collaboration with Maryland Public Television on public outreach programming, and to catalog, aggregate, articulate, and conduct technical correlations for adolescent literacy, STEM and algebra II resources.

Impact

- Expanded Instructional Toolkit with multi-media rich instructional resources made available to all LEAs.
- Provide critical support to classroom teachers as they implement the Maryland State Curriculum.

6

STEM Instructional and Career Support (Project 16|20)

Project Overview

- Project to establish a STEM support hub to allow teachers to easily identify experts who can advise them on best practices, visit classes to share their authentic work, and potentially open up their workplace for student visits, promoting student engagement in STEM careers.

Major Deliverables

- Map resources and services to Maryland's science, math, engineering and technology curricula.
- Develop delivery model and conduct Biology pilot in two school districts.
- Redesign volunteer management system to engage industry volunteers.
- Increase student engagement in career exploration activities.

Impact

- Identify, recruit, and train STEM industry practitioners and volunteers (business, higher education, and government) to provide timely, relevant, curriculum-specific support to classroom instruction.

7

Implement a Statewide System to Support Student Instructional Intervention (Project 21|42)

Project Overview

- Project provides teachers with a system that enables them to develop and document instructional interventions to improve both class and individual learning while tracking outcomes.
- The system places students at the center of the learning process allowing them to interact with the teacher to plan a course of action and track progress.

Major Deliverables

- Product selection through the State's standard procurement process.
- Installation and configuration of the application within a consolidated RTTT technology environment.
- Piloting with early adopters in LEAs.
- Statewide deployment for use by all LEAs.

Impact

- Support teachers in developing and documenting learning improvement strategies for the class and individual students.
- Integrates teaching and learning solutions for the teacher along with diagnostic and reporting tools to identify student progress.
- Provides an online learning plan for students and enables them to review and track their learning interactively.

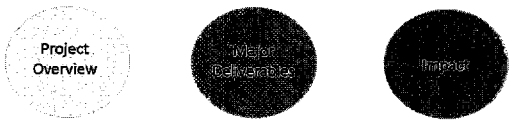
8

Develop Online Instructional Intervention Modules (Project 22|06)

- Project to develop content and defines instructional activities that a student can use for enrichment and remediation, leveraging the Student Instructional and Intervention System (Project# 21|42).
- Develops or procures 250 online instructional modules per year.
- Configure and deploy modules into the Student Instructional and Intervention System.
- Students will be able to complete modules as assigned by their teacher as part of a remediation or enrichment strategy aimed at improving classroom instruction based on the results of formative assessment testing.

9

Develop Framework for Teacher Toolkit Portal (Project 23|55)



- Project to identify professional learning resources for teachers and principals made available via the Online Instructional Toolkit.
- Provides a user friendly resource for teachers and principals to tap professional development resources linked to the State Common Core Curriculum.
- Develop quality control review protocols.
- Identify content and tools to be included in the professional development portal.
- Deploy content and tools into an centralized toolkit portal.
- Toolkit will provide educators with access to a variety of online and face-to-face professional development tools that will help them establish their individual professional development plans, and provide opportunities to collaborate online.

10

Develop and Implement a Course Registration System (Project 24|56)

- Project to procure and implement a centralized Course Registration System (CRS) to support both the delivery of professional development training to educators as well as track their professional development history.
- Product selection through the State's standard procurement process.
- Installation and configuration of the application within a consolidated RTTT technology environment.
- Piloting with early adopters in LEAs.
- Statewide deployment for use by all LEAs.
- Provide a single point of access for educators to register for a variety of online, instructor, and academy programs.
- CRS will act as a historic repository for professional development education and skills training.

11

Implement a System to Support ELearning for Intervention, Enhancement, and Enrichment (Project 26|43)

- Project to implement an advanced web-based, multi-media learning environment for student learning remediation, and to advance accelerated learning to augment classroom instruction.
- Product selection through the State's standard procurement process.
- Installation and configuration of the application within a consolidated RTTT technology environment.
- Piloting with early adopters in LEAs.
- Statewide deployment for use by all LEAs.
- Provide education and training support that augments the classroom experience.
- Provides resources to students to engage in lesson remediation or accelerated learning.
- Web based delivery allows for learning outside of the classroom beyond traditional school hours.

12

Expand Educator Information System to Accommodate Additional Data (Project 30|49)

- Project to expand the data and reporting capabilities of the Educator Information System to include new educator data sets, and the implementation of data import programs to facilitate data analysis and reports supportive.

- Collaboration with vendor to design, test, and implement new features as required by new federal mandates.
- Custom expansion of the existing system with new hardware and software, along with external consulting services as required.

- Collecting this data makes it possible to identify which students and which courses are being taught by teachers with different levels and types of preparation or certification, and which forms of teacher training and certification have the greatest impact on students' academic growth in the classroom.

13

Develop Online PD on Educator Instructional Improvement Content (Project 43|21)

- Project to develop an online model to deliver teacher academies based on the Common Core Curriculum, Assessments, and effective use of the Instructional Improvement System.
- Project ensures that content presented in face-to-face academies is accessible to teachers across the state for years to come.

- A total of 12 courses will be developed, including: Elementary reading, math, and STEM, middle school reading, math, and STEM, Algebra I and II, English 10 and 11, and 2 high school STEM courses.

- The 12 courses developed as part of this project will be accessible to educators across the state each year, and the content can be updated yearly by existing staff in the Division of Instruction.

14