

Technology Program Review

Bridgewater-Raritan Regional School District

**Jaimee Kochis
K-12 Supervisor of Instructional Technology**

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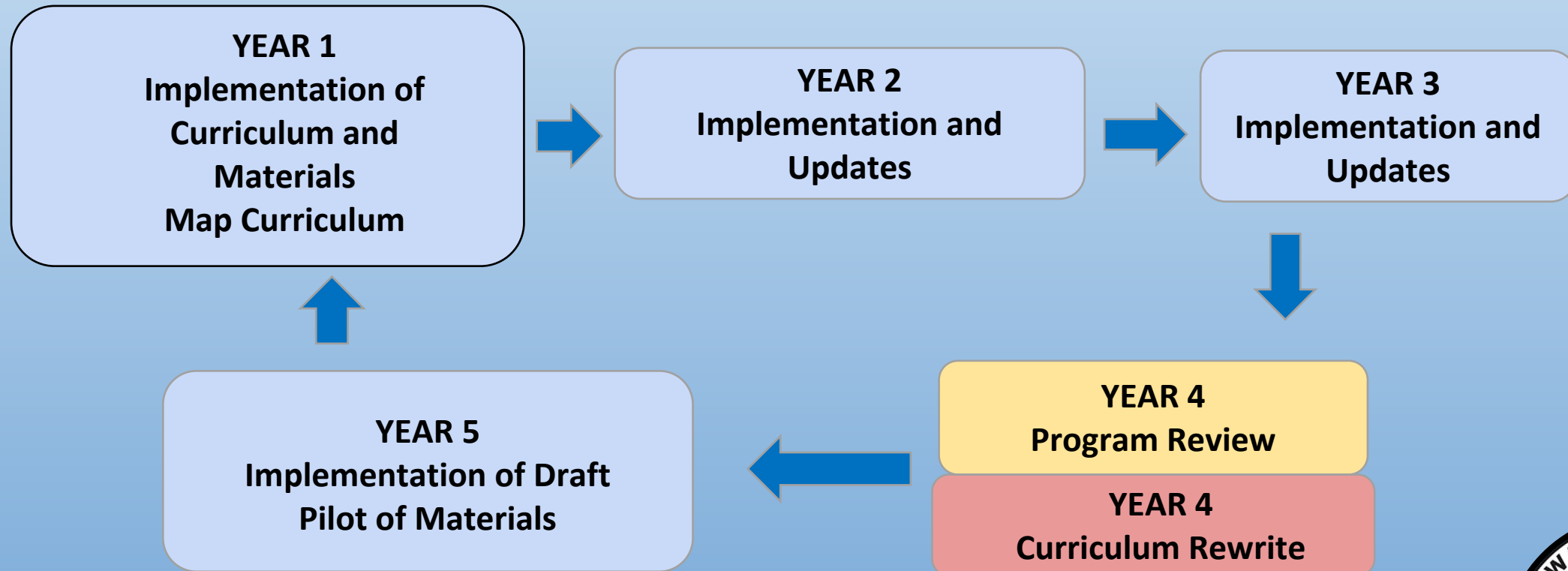
Goals and Purpose

- A description of the program
- A review of the curriculum, instruction, assessment, resources and professional development
- Site visits
- Summary of survey responses
- Recommendations for curriculum revision process

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The 5-Year Cycle

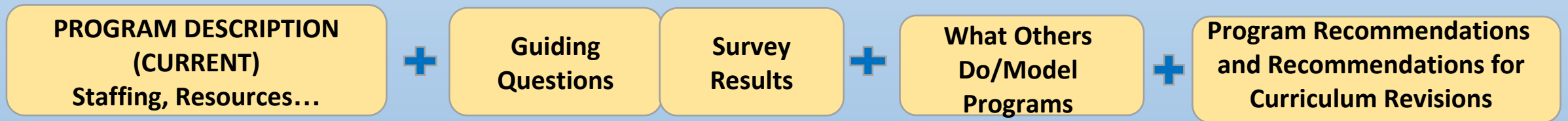


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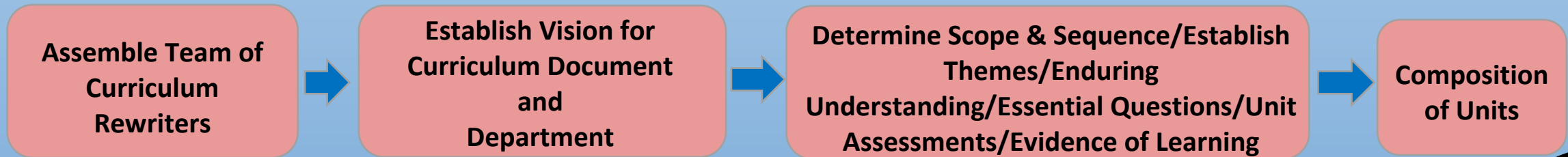


Year 4 Breakdown

PROGRAM REVIEW (Part 1)



CURRICULUM REWRITE (Part 2)



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Current Program

- **Curriculum**
- **Instruction**
- **Assessment**
- **Resources / Professional Development**

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Current Program

Curriculum:

- The current curriculum was written in 2006 and does not directly align to the current New Jersey Student Learning Standards (NJSLS) 8.1 Educational Technology and 8.2 Technology Education, Engineering, Design and Computational Thinking/ Programming, which were updated in 2014.
- The curriculum does not reflect integration of the International Society for Technology Education (ISTE) Standards for students which were revised in 2016.

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Current Program

Instruction:

- The goal of the computer department is to develop the student's capacity in technology for use inside and outside of school.
- Technology has changed greatly since the curriculum was last revised, and as a result there is inconsistency in content and implementation in each building.
- In recent years, there is improved implementation and instruction of Google Apps.
- As a result of the recent Hour of Code movement, students receive an introduction to coding. The depth of implementation varies based on school.
- Keyboarding instruction occurs in grades 2-4, the software used varies based on building.
- Learning activities vary from building to building.

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Current Program

Assessments

- There is not a standard grade level assessment for all students.
- Assessments are informal and vary from building to building.
- At the elementary level, students do not receive a grade on their report card.
- At the intermediate school, students do receive a letter grade.

Resources

- K-4 computer labs are 7-8 years old.
- The intermediate computer labs were replaced in the spring of 2017.
- Supplemental materials vary from building to building.

Professional Development

- Teachers have received little professional development.
- Most computer teachers attended the Google Boot Camp in August of 2016 are Google Certified Educators.

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Site Visits

Site visits were conducted by a BRRSD team including classroom teachers, computer teachers, library media specialists and a principal. Site visits occurred inside and outside of the county, as well as above and below our DFG. Other “I” school districts were researched but not visited. These districts include Ramsey in Bergen County, and Hopewell in Mercer County.

School District	County	District Factor Group	# Schools	# Students
Morris School District	Morris	GH	10	6,000
Somerville	Somerset	FG	3	2,500
Flemington-Raritan	Hunterdon	I	6	4,500
West Windsor- Plainsboro	Mercer	J	10	10,000
Hillsborough	Somerset	I	9	7,500

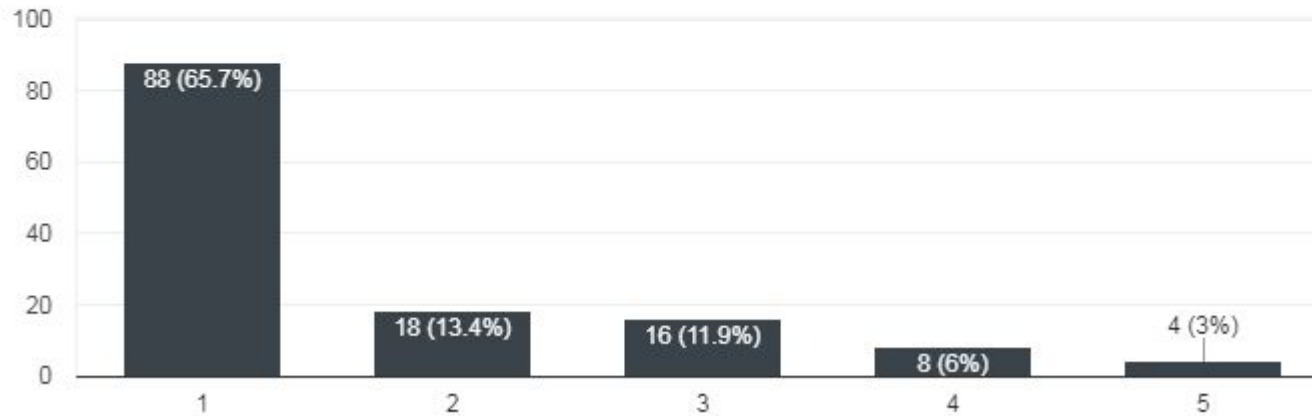
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Parent Survey Results (134 Responses)

I think the Technology Special is an important part of a child(ren)'s academic studies/experience.

134 responses



Parents strongly agreed that technology is an important part of their child's academic experience.

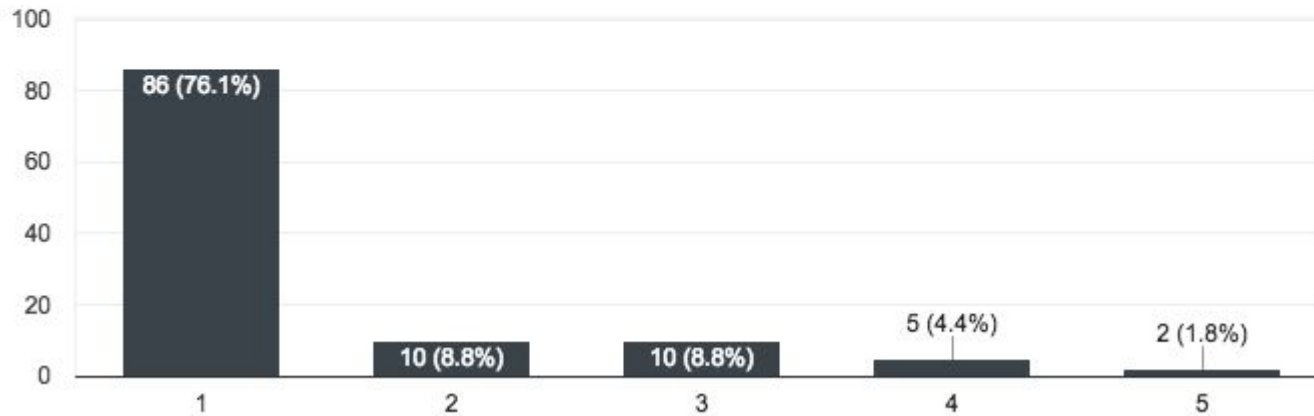
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Staff Survey Results (Approximately 25% of teachers responded 113/450)

I think the Technology Special is an important part of a students' academic studies/experience.

113 responses



Staff responses mirrored community sentiment, indicating technology is an important part of each student's academic experience.

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Survey Results

Google

Parents and Teachers both reported that Google Apps and keyboarding should be taught, as well as coding and robotics.

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Recommendations are based on:

- **Assessment of our current program**
- **Survey results**
- **Site visits**
- **Research of best practices**
- **Evaluation of standards (NJ SLS 8.1, 8.2, ISTE)**
- **Conversations with district staff**

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Program Recommendations

PROGRAM

CURRICULUM WRITING

ASSESSMENT

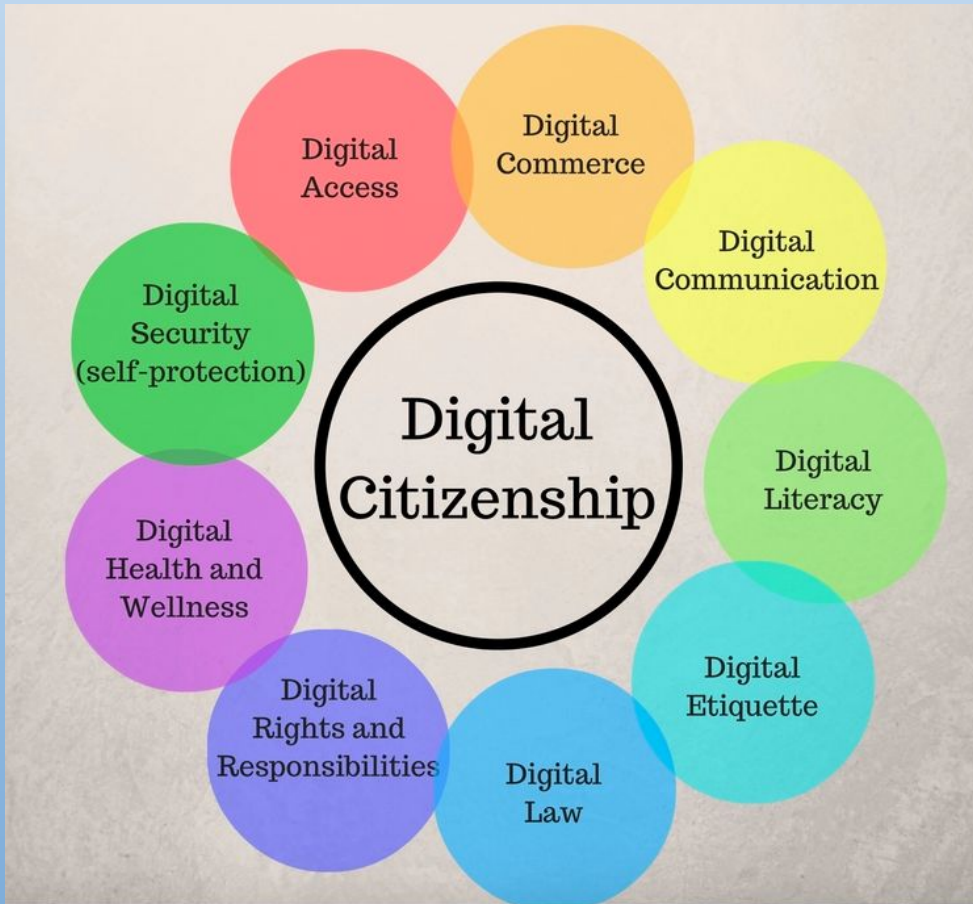
RESOURCES

PROFESSIONAL
DEVELOPMENT

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Program Recommendations



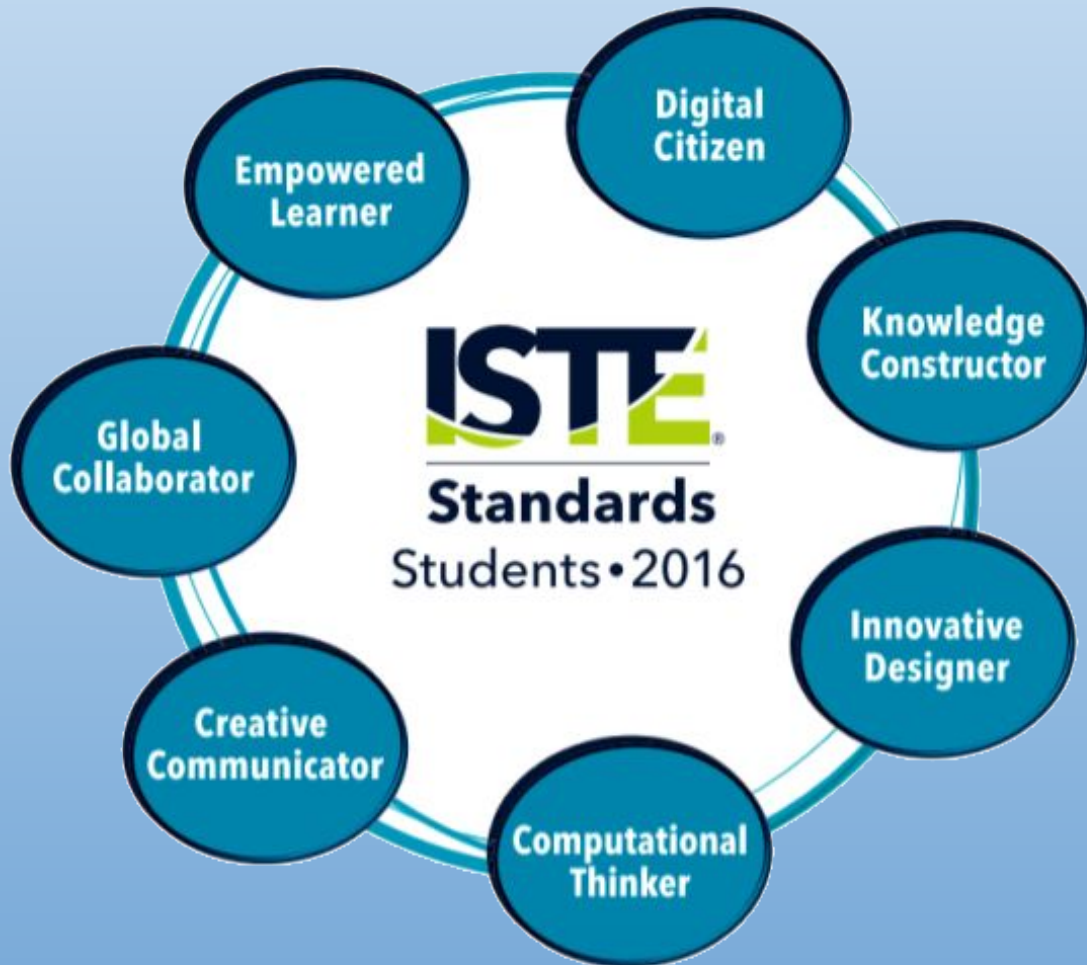
PROGRAM:

- Create consistency in the implementation of our curriculum districtwide.
- Align the curriculum to NJSLS 8.1 and 8.2.
- Infuse *digital citizenship* strands into curriculum.

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Program Recommendations



- Enhance the current curriculum with the infusion of the *ISTE standards*.
 - Empowered Learner
 - Digital Citizen
 - Knowledge Constructor
 - Innovative Designer
 - Computational Thinker
 - Creative Communicator
 - Global Collaborator

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Program Recommendations



- Replace current computer cycle with a Digital Thinking course taught to students in grades 1-4.
- This course will focus on basic coding and robotics skills as well as Google Apps and Digital Citizenship.
- A scope and sequence will be created that demonstrates how skills are built upon from one year to next. As students are introduced to concepts earlier, the curriculum will need to be adjusted to meet the students needs.

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Program Recommendations



- Replace current computer cycle in grades 5-6 to create Innovation and Design course to be taught in marking period cycles.
- The Design Engineering tasks allow students to design, build, and program robots.
- In the Programming Innovation portion of the class, students will work on problem-based tasks that allow them to be inventors as they prototype and learn with electronics.
- The Innovation and Design Course in grade 6 will focus on 3D Design. Students will create 3D models that are designed to infuse architecture engineering, science, and math.



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Program Recommendations

- Explore opportunities in scheduling for K-4 computer teacher to collaborate at grade level meetings and with library/media specialist to support integration of technology.
- Explore opportunities for computer teacher to support classroom teacher in infusing technology into classroom instruction.

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Program Recommendations

CURRICULUM WRITING:

- Curriculum writing in Spring of 2018.
- Curriculum revisions in Spring of 2019.

ASSESSMENT:

- Create and implement computer applications pretest to assess students knowledge and use results to design targeted, meaningful instruction.
- Create and implement computer applications post-test to assess student growth.
- Create consistent assessment criteria for measuring student progress.
- Create and share grade level competencies / rubrics with teachers.

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Program Recommendations

RESOURCES:

- Replace desktops in computer labs with Chromebooks.
- Research, evaluate and purchase materials to support coding, robotics, innovation and design.

PROFESSIONAL DEVELOPMENT:

- A plan will be created in order to provide ongoing, targeted professional development for our staff.

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Thank you.

If we teach today's
students
as we taught
yesterday's,
we rob them of
tomorrow.
- John Dewey

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