



Network Infrastructure to Protect Data and Instruction

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School District of Pickens County

About SDPC

Dr. Danny Merck, Superintendent

Dr. Brian Swords, Chairman

Mr. Shannon Haskett, Vice-Chairman

Mrs. Betty Garrison, Secretary

Mrs. Betty Bagley

Mr. Phillip Bowers

Mrs. Karla Kelley



Building success beyond the classroom

About SDPC

14 Elementary Schools

5 Middle Schools

4 High Schools

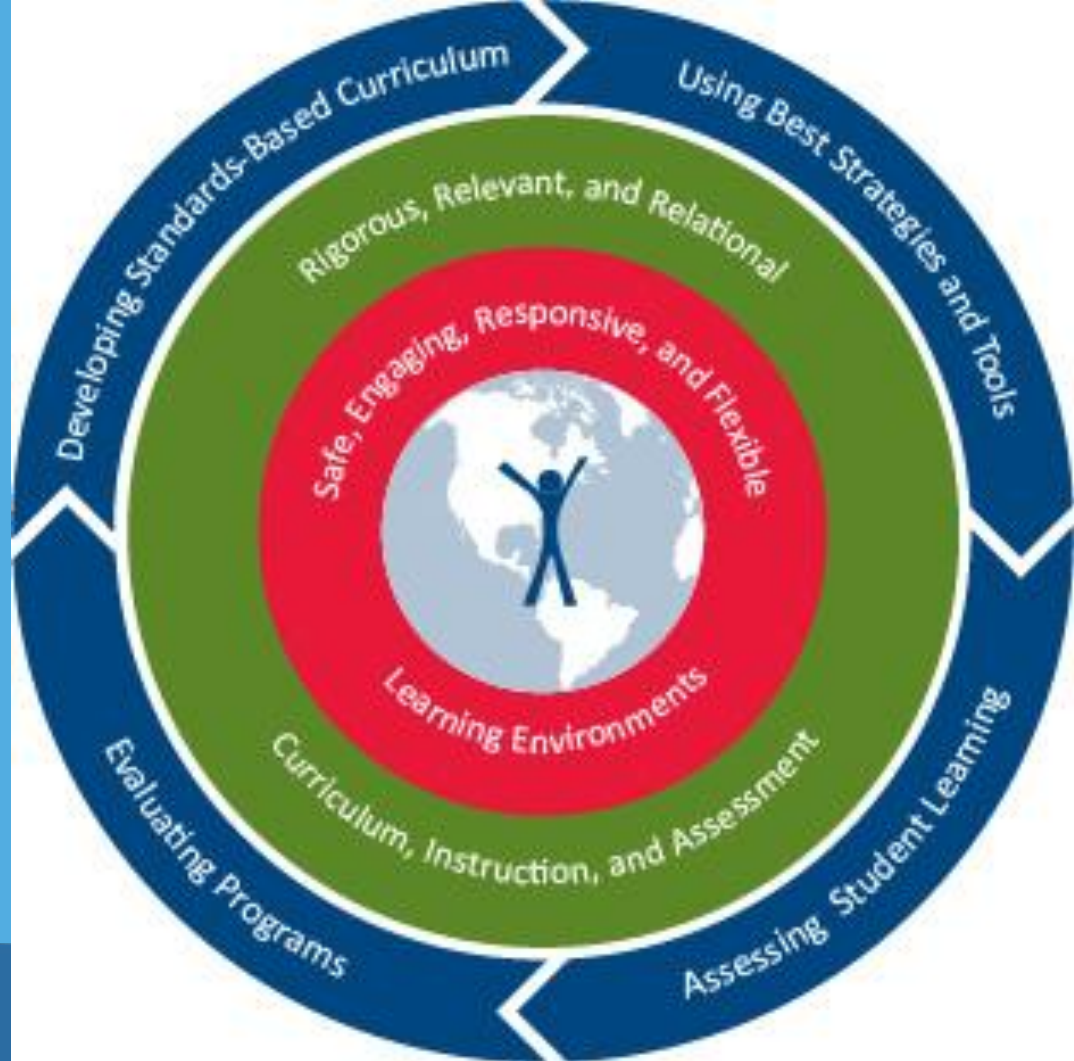
1 Career and Technology Center

16,000 Students



Building success beyond the classroom

Technology Supports Instruction



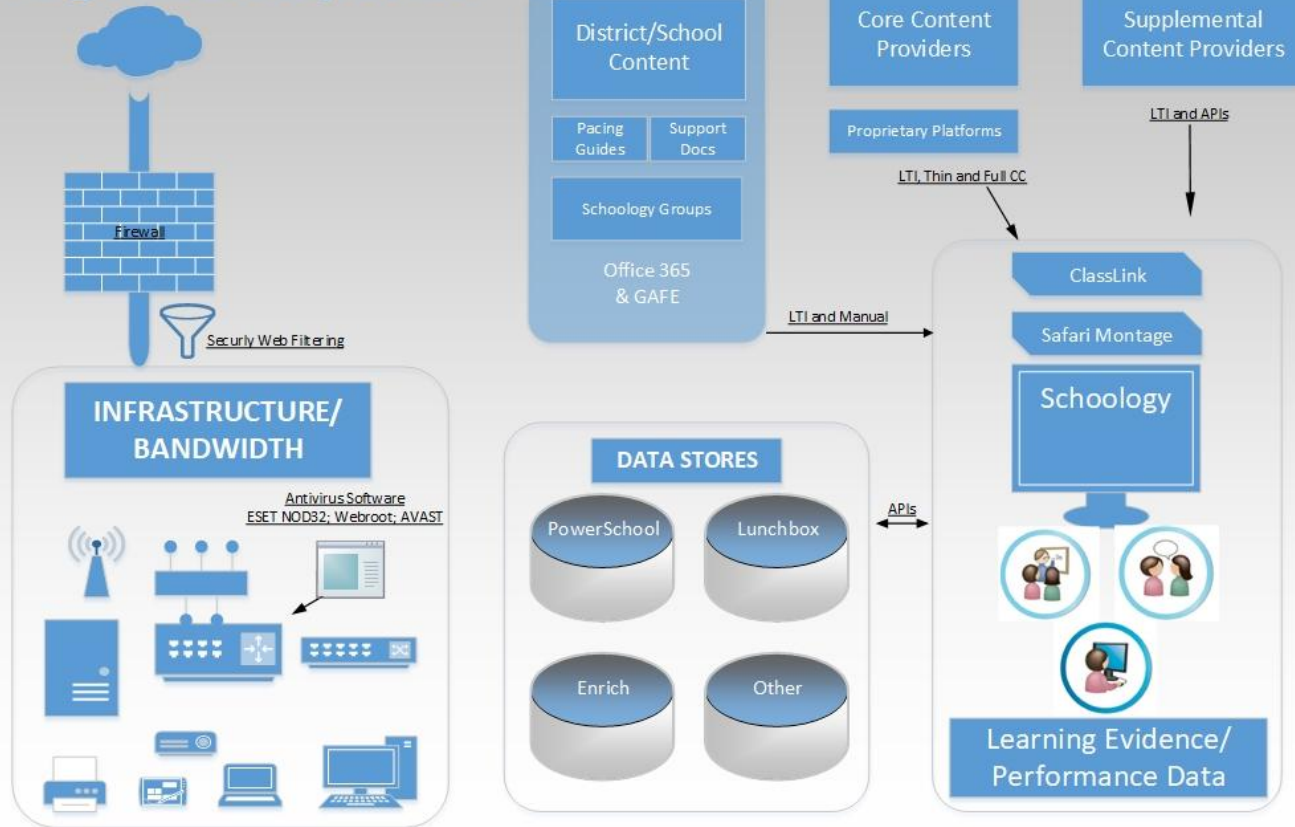
Vision: Technology Supports Instruction

- Instructional Innovation
- Technology enables and supports innovation
- Digital Ecosystem (focus on interoperability)
 - Single Sign-On - Classlink
 - Central LMS as a key part of our digital ecosystem - Schoology
 - Learning Object Repository - Safari Montage
- Tech It Home: 1:1 in grades 4-12
- Our instructors focus on educational innovation like...
 - Flipped classrooms
 - Personalized instruction
 - Reaching homebound and home-based students

This ultimately has driven student engagement/achievement.

Know Your Network

Digital Ecosystem



Do your homework!

Identify your critical systems!

Chart your data flow!

4 years ago we had 11 systems with no backup. Today that is 3 systems.

Know Your Risks

Hire outside auditors!

External [Security Audit](#)

Internal [Security Audit](#)

Google [Audit](#)

Cyber Security Insurance

Develop a Plan

Plan

Business Continuity Plan

Disaster Recovery RFP

Build a Better Solution

Build First-Class Infrastructure

Hybrid-cloud backup system

Build First-Class Infrastructure

Hybrid-cloud backup system

Leased Dark Fiber Network

Internet 2

Data Center



The Broadband Imperative II:

Equitable Access for Learning ([SETDA](#))

INTERNET TARGETS	2020-2021 Targets
Small School District (Fewer than 1,000 students)	At least 4.3 Mbps per user (Minimum 300 Mbps for district)
Medium Sized School District (3,000 students)	At least 3.0 Gbps per 1,000 users
Large School District (10,000 students)	At least 2.0 Gbps per 1,000 Users (SDPC - 36 Gbps)
<p>^Published by SETDA 2012; Adopted by the FCC in 2014 https://www.fcc.gov/general/summary-e-rate-modernization-order *User: students, teachers, administrators, staff, and guests</p>	

The Broadband Imperative II:

Equitable Access for Learning ([SETDA](#))

WAN TARGETS	2020-2021 Targets
Connections to each school to link to the internet via a district aggregation point and for in-house administrative functions	At least 10 Gbps per 1,000 users (SDPC 3-13 Gbps per school)
*User: students, teachers, administrators, staff, and guests	

E-Rate Modernization

Overview

Category 1 Special Construction Costs

Category 1 Monthly Recurring Costs

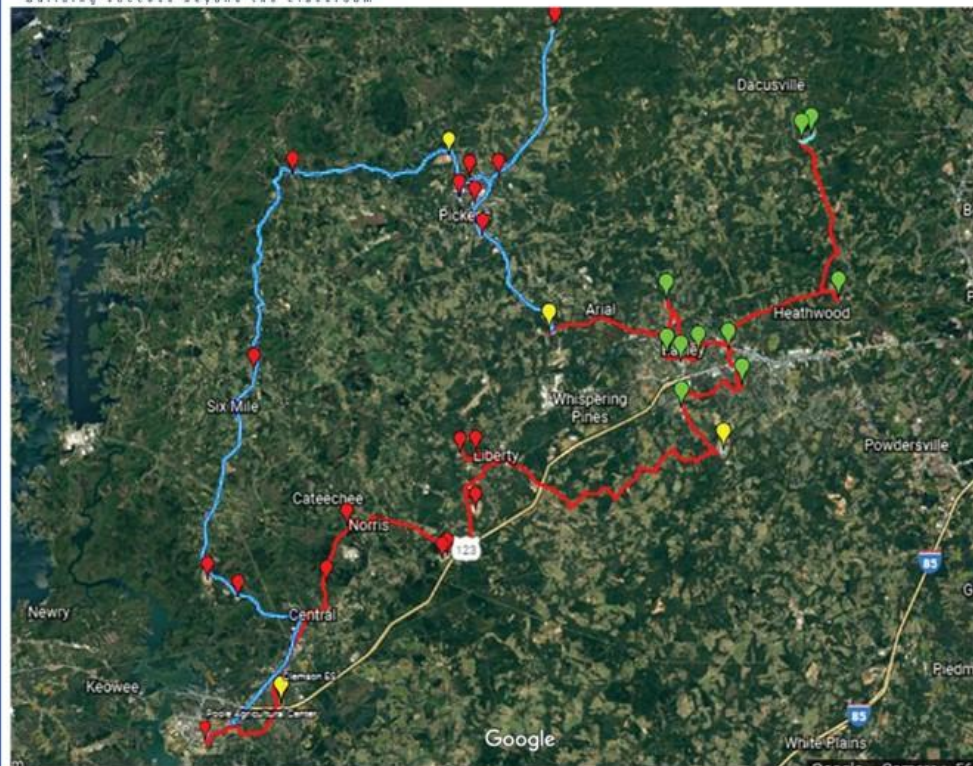


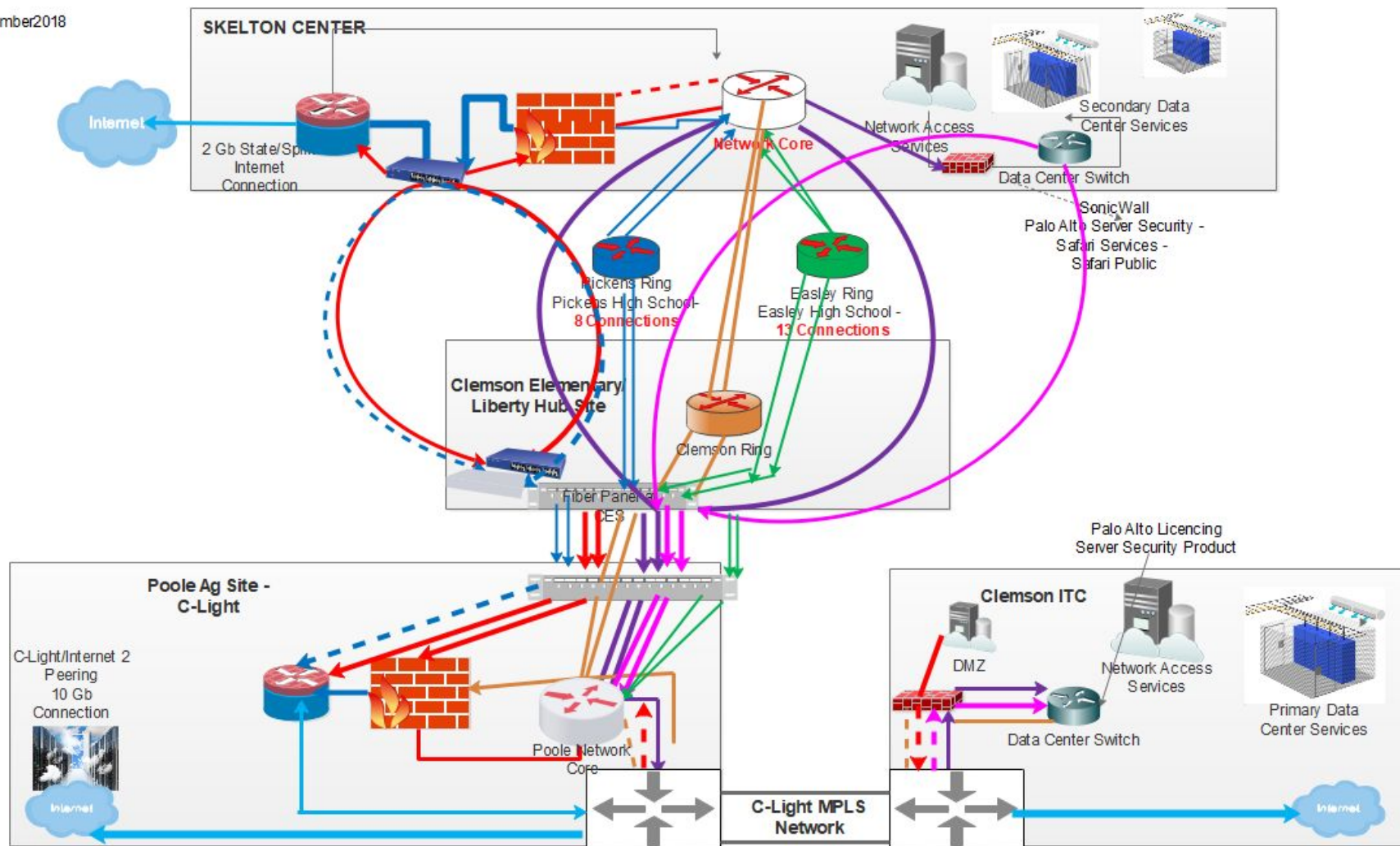
Process

- Hire an expert consultant. [Education Partners Solution, Inc.](#)
- Meet with local fiber providers including rural cooperatives
- Network Design Options
- RFP Process
 - Lit Options
 - Dark Fiber



School District of Pickens County Infrastructure for Digital Learning Initiative September 2018





Funding Options: Our ROI is 7 years 9 months

- Existing Circuits
- Existing Hardware and Power Costs
 - AD Servers
 - DHCP/DNS
 - Caching Servers
 - Virtualized Labs
 - Consolidate VOIP Routers
- Consider off-site carrier-neutral data center
- Consider Internet2 Services

You may be surprised at what the state-provided network actually costs!

Protect Data

Data Security

Student Web Apps and COPPA

OneRoster

LTI Advantage

Secure Logins (QR Codes for K-1)

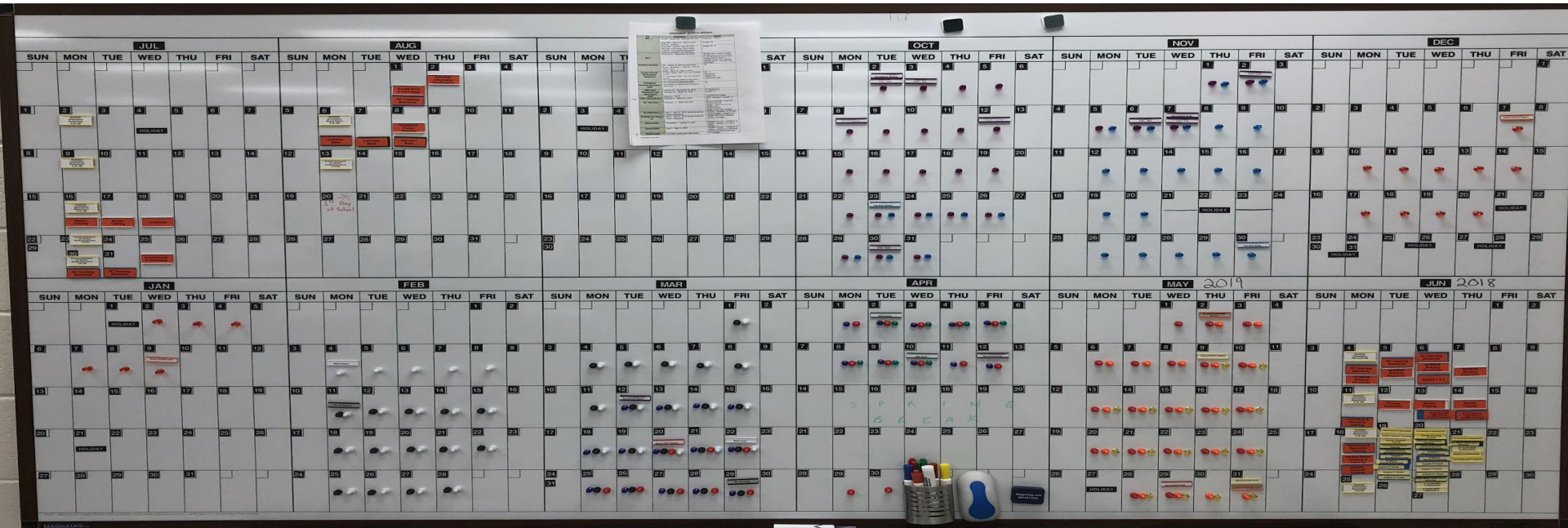
Supporting Safe Buildings

Safe Buildings - Buy time to react!

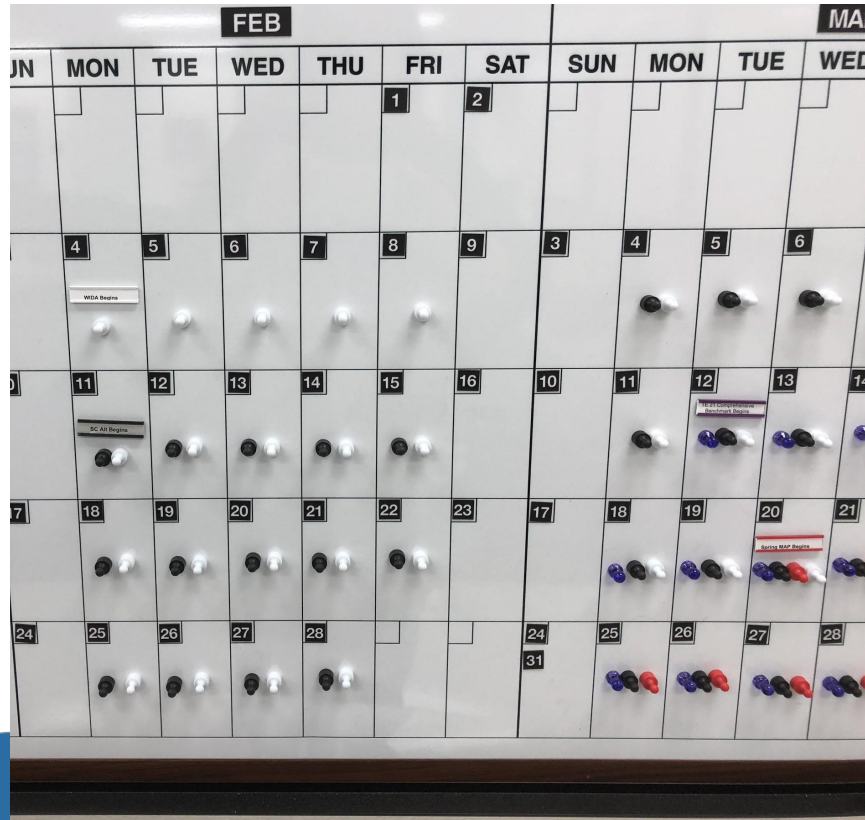
- SROs in all buildings - cars parked out front
- Frequent Training
- Modified Lockdown
- Safe Rooms
- A1 Phone -Secure Entrances
- Badge Card Access
- E911 - CISCO Phones
- Security cameras with fully digital camera system
 - Exterior Doors
 - Blind Spots
 - Hallways
 - High Traffic Ways

So what?

SDPC Assessment Calendar



SDPC Assessment Calendar



It's not just about safety. It's about time!

- 10 minutes a day adds 30 instructional hours back to one teacher's class!
- If we can test in week 3 of the window and do make-ups in week 4, we have given two instructional weeks to every child!
- At a minimum, we are adding 3 weeks of instruction prior to high-stakes assessments by thoughtfully designing our network infrastructure and digital ecosystem.

90 hours

\$9.3 Million

How do we do this?

- **We have an educated/informed school board that puts students at the center. (CIP)**
- Superintendent who supports innovation and “out of the box” thinking.
- We are connected nationally and internationally, and not just in our state.
- We have a collaborative culture
 - Senior Leadership, District Leadership
 - Departments work together! Instruction, Technology, Finance, and Operations

It starts with YOU!

From Good to Great!

INSTRUCTIONAL TASKS


- Video Conferencing
- Incorporate emphasis on problem solving, collaboration, rigorous real-world tasks
- Focus on balancing screen time with joyful learning
- Web Apps - Wild, Wild, West
- Instructional Dashboard

ADMIN TASKS

- Administrative Dashboard
- Data Security Policy
- Penetration Testing
- Incident Response
- Ongoing vulnerability scans
- 2 Factor Authentication

This ultimately will further drive student engagement/achievement.

If they aren't talking
about us, it's a good
thing!



Questions

