Hollis School Board
Wednesday, August 10, 2016
Hollis Upper Elementary School
6:00 PM
All Times are estimates and subject to change without notice

6:00   Call to Order

6:05   Agenda Adjustments

6:10   Approve Meeting Minutes
        Nominations/Resignations/Correspondence

6:20   Public Input

6:30   Discussion
- Update on summer maintenance projects
- Referral of Job Description policy to the policy committee
- To discuss students utilizing the on-line version of the Smarter Balanced State Assessment
- Energy Study Working Group update on July work

6:40   Presentations
- Strategic Plan presentation – Assistant Superintendent – Gina Bergskaug
- Technology Plan update – Information and Technology Director – Richard Raymond

7:15   **Deliberations**
- To see what action the Board will take regarding the policies outlined in the memo from the policy committee – Frist reading for all policies

7:25   Non – Public under RSA 91-A: 3II (a) Compensation and/or (c) Reputation

7:30   Motion to adjourn

Job Descriptions

Problem: The lack of a clear school board policy on this topic has led to the inability to proceed on the approval of several pending job description revisions and the hesitancy to pursue other needed new and revised job descriptions.

There is additional confusion on who has the authority to revise formats and the role of the unions in the process.

Resolution: A new policy that clearly outlines the expectations of each school board especially the determination of the final approval (please see suggested policy). Also needed is a procedure created by the Superintendent that clearly outlines the creation, revision, approval and distribution of all job descriptions (please see the Superintendent's draft procedures).

Job Descriptions

Requirements

A written job description shall be prepared for each position to ensure that every employee has a clear and concise explanation of the tasks that the school board is expecting him/her to perform.

Job descriptions will be developed by the business administrator and the supervisor and/or the building administrator. The format of all job descriptions will be determined by the business administrator and all job descriptions will be maintained by the business office. All job descriptions should be reviewed on a regular basis as determined by the Superintendent.

The goal of each job description is to provide clear and easily understood requirements of the position. If there is a duty or responsibility in the job description the employee does not understand, it is the employee's responsibility to seek clarification from the building administrator.

Every job description should include the essential duties and responsibilities that an employee is expected to perform, the skills, competencies and physical/cognitive abilities needed to do the work and the conditions and term of employment.

Approvals

All new and revised job descriptions will go through an approval process developed by the Superintendent that will include gathering union feedback for union job descriptions. Job description content will not be part of the negotiations for collective bargaining agreements. Final approval of all new and revised job descriptions resides with the Superintendent.

Procedures

Please see the detailed procedures, as developed and maintained by the Superintendent, that describes the creation, revision, approval and distribution of all job descriptions.

Job Description Procedures

These procedures were developed in accordance with Policy GAA.

New Job Description Creation and Approval Procedures
1. New job descriptions will be created by the business administrator with input from other employees as needed to include, but not limited to, the human resources coordinator, the supervisor, the building administrator, SAU administration and the union president.
2. The job description will conform to the format as determined by the business administrator.
3. Drafts will be distributed to the appropriate supervisors, administrators and to the union president for their comments and suggested changes.
4. Once all applicable feedback has been captured and the appropriate changes have been made, the final draft will be submitted to the superintendent for his/her review.
5. Following any changes requested by the superintendent, the final, original job description will be signed and dated by the superintendent and filed in the business office with the other official current job descriptions.

Current Job Description Revision and Approval Procedures
1. All job descriptions will be reviewed by the business office every 3-5 years. If it is determined that revisions need to be made, the needed revisions will be documented and used to create a new final draft of the job description.
2. Drafts will be distributed to the appropriate supervisors, administrators and to the union president for their comments and suggested changes.
3. The final draft will be submitted to the superintendent and if approved, the superintendent will sign and date the final revision which will be filed in the business office along with the documentation originating the revision. The revision should capture all previous revision dates.
4. If no revisions are made based on the review process, the date of the review will be noted on the current official job description as maintained in the business office.
5. If the need for a revision arises outside the review process, a written request, in the form determined by the business administrator, will be submitted to the business administrator documenting the desired revisions.
6. If the business administrator accepts the revision, a new final draft is created and the process, as described in #2 and #3 above, is followed to completion.

Job Description Distribution Procedures
1. All newly created job descriptions are filed with the other official descriptions maintained in the business office.
2. All revised job descriptions are also filed with the others in the business office and distributed to the affected employee(s), supervisor and building administrator. The revised description is also incorporated into each affected employee(s) personnel file.
3. The most current job description for each position under the SAU umbrella will be on the SAU website.
4. All individuals interviewing for a job under the SAU umbrella will receive the most current job description prior to their interview.

To: Andy Corey, Superintendent of Schools
Hollis School Board Members
From: Gina Bergskaug, Assistant Superintendent of Schools
Re: Smarter Balanced Assessment

School Board Members,

Prior to the 2014-2015 school year, schools in SAU 41 requested permission from the NH DOE to administer the Smarter Balanced Assessment in the paper and pencil version rather than utilizing the computer adaptive assessment. Permission was granted for two years. It is quite cumbersome to score the paper and pencil test, so this delays receiving the results for quite some time. While some districts are able to access the tests results in a few weeks, our district must wait until the fall of the next school year. This delay prevents our teachers from making necessary instructional shifts to best meet the needs of the students in their classrooms.

For the 2016-2017 school year, I am requesting that the Hollis School Board grant permission to utilize the computer-adaptive edition for grades 3-6. There is a seven week window in which we can administer the test to all of our students in grades 3-6. This allows us to make use of computers that are hard-wired to minimize potential problems related to a possible weak wireless connection. Both the bandwidth and hardware we have available more than surpass the minimum recommendations provided by the state assessment portal. The assessment portal also provides practice assessments that are available prior to the testing window so that students may become familiar with the online tools available to them. Finally, a secure browser is installed on each of the machines to ensure a fair assessment and avoid distractions from competing programs.

Because the test was designed to be adaptive, the results collected from our district's paper and pencil version are not comparable to other districts. Therefore, we are not maximizing our ability to learn from the data.

			Jul	Aug	Progress as of 7/28/2016
II	6	Develop and review detailed project scope with HSB energy study working group (ESWG)			Finalized and approved at 7/18/2016 Hollis School Board meeting.
II	7	With consent of ESWG, develop requirements document that includes following: building performance criteria, code requirements, potential future condition, and specific heating system criteria for use with vendors.			Draft of "Existing Conditions and Performance document" submitted to ESWG on 7/7, based on consensus direction from 6/23 ESWG meeting. Additional detailed document summarizing heating systems in preparation: will cover existing conditions, current heat load, considerations related to hydronic distribution and controls. We can also make projections of future heat load but only after the ESWG provides guidance about how they want to address current shell conditions and obtains access to the existing heat load model developed for the ASHRAE audits.
II	9	Work with ESWG to develop materials for energy study web page and other outreach tools for keeping community informed of project progress, including monthly progress reports, and tours summary			No additional materials in July.
II	10	Identify conventional fossil and renewable heating system vendors			Draft list of recommended vendors submitted to ESWG for comment on 7/20.
II	11	Confer with ESWG on the role of other outside expertise: e.g. Resilient Buildings Group, John Penney Consulting Engineers -- to help in specifying building parameters and develop range of conventional fossil and renewable heating/efficiency options			Have drafted scope of work for Resilient Buildings Group and John Penney Consulting Services; submitted to ESWG for review on 7/18. Currently finalizing subcontracts with these two companies. Arranging school tour for both with cooperation of Chuck Stohl and Ed Hinckley; date TBD.
II	12	Organize INRS/HotZero technical team: Resilient Buildings Group; John Penney Consulting Engineers; possible energy modeler			See II(11) above
II	14	Communicate with selected vendors both heating and other			Initial conversations with all vendors on list submitted to ESWG.

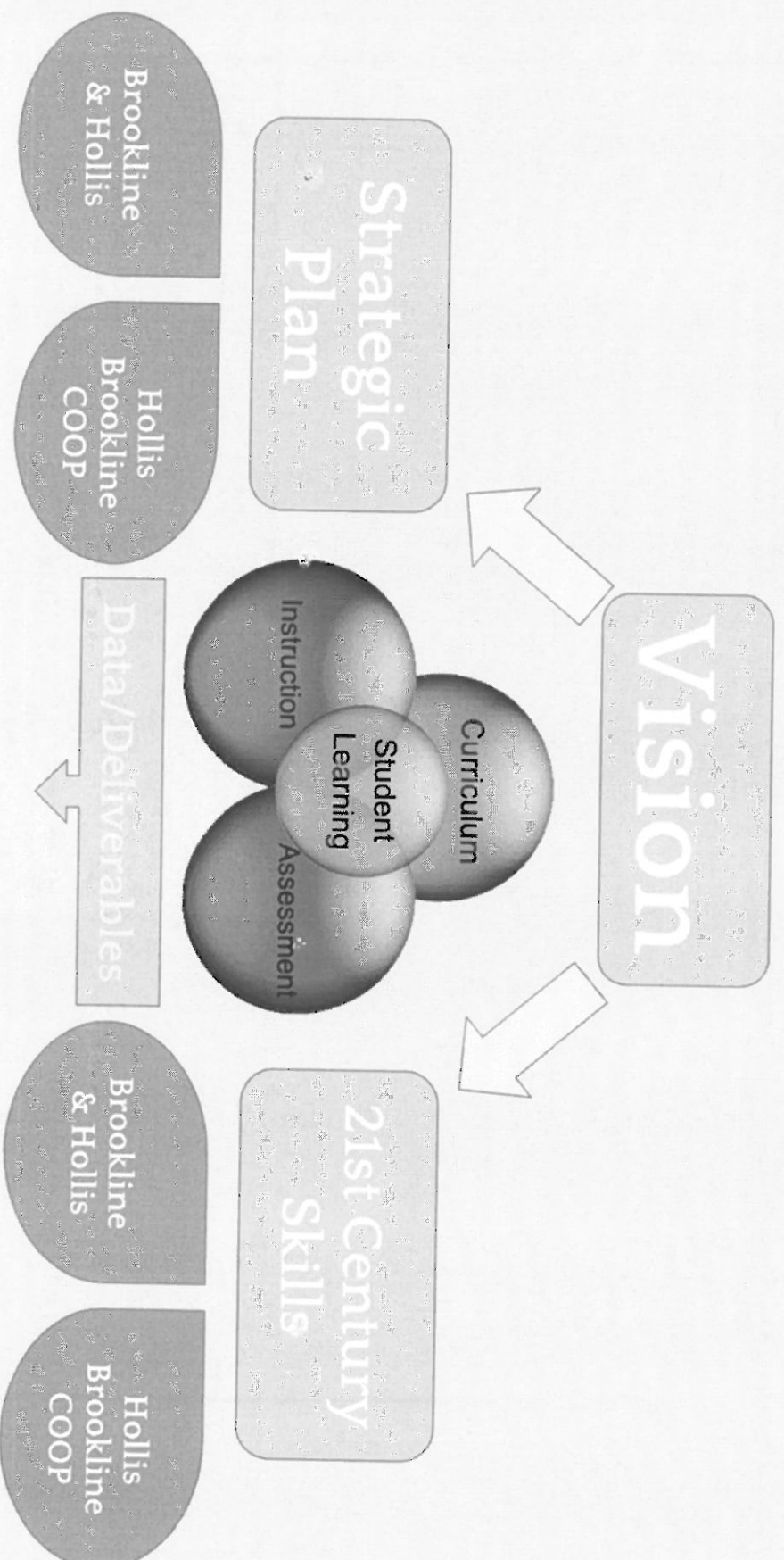|					
IV	19	Secure cost estimates from conventional fossil and renewable heating system vendors			Focus of cost estimating has been for pilot ASHP/PCM in HPS library, working with ShiftNRG.
IV	20	Refine least cost conventional fossil and renewable heating system/efficiency options and gain consensus support for focused range of options from the ESWG			Focus has been on development of ASHP/PCM pilot for HPS library, working with ShiftNRG.
IV	21	Conduct initial technical and financial analysis of selected options based on input from vendors and ESWG			Focus has been on development of ASHP/PCM pilot for HPS library, working with ShiftNRG.
IV	25	Working with HEC members Paul Happy and Woody Hayes, develop analysis of 100 kw solar PV installation			D. Henry participated in tour with ESWG and Hollis Energy Committee members on 7/11.

SAU 41

Mission → Vision

SAU 41 Mission

- To ensure a strong supportive learning environment focused on academic excellence

HOLLISBROOKLINE

SAU 41

HB

graduate

How do we get there?

Vision

Strategic Plan

21st Century Skills

Data/Deliverables

Student Learning

Instruction

Curriculum

Assessment

Brookline & Hollis

Hollis Brookline COOP

Brookline & Hollis

Hollis Brookline COOP

SAU 41 Vision

- 4 Cs
  - critical thinking
  - collaboration
  - creativity
  - communication

The final Product
Our igloo!

SAU 41 Vision

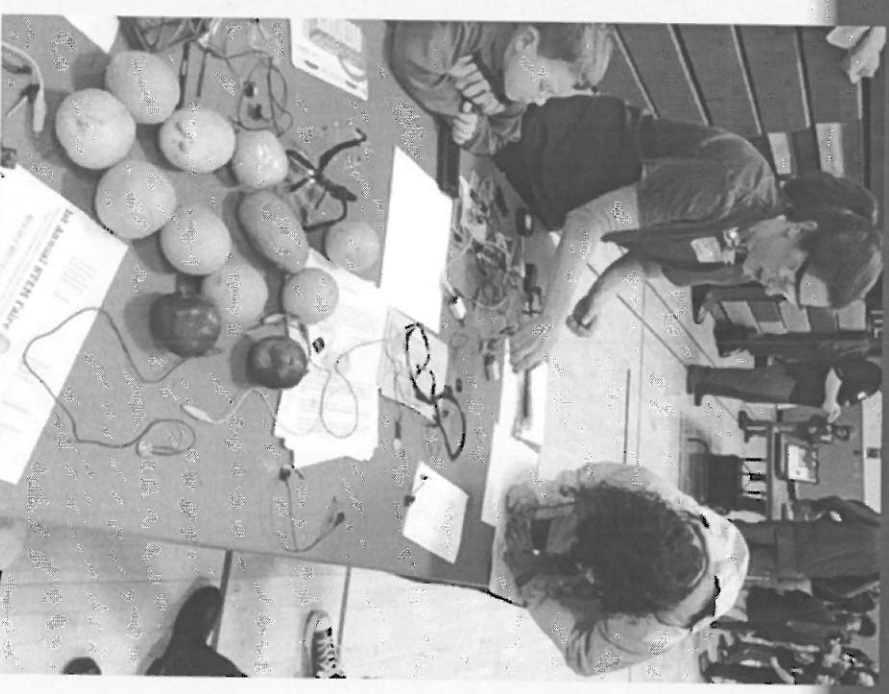- Critical & original thinker across all content areas and from all angles

SAU 41 Vision

Community Partnerships

Ron Christie, owner of Living Earth Farm in Brookline, assisting with Life Skills at HBHS

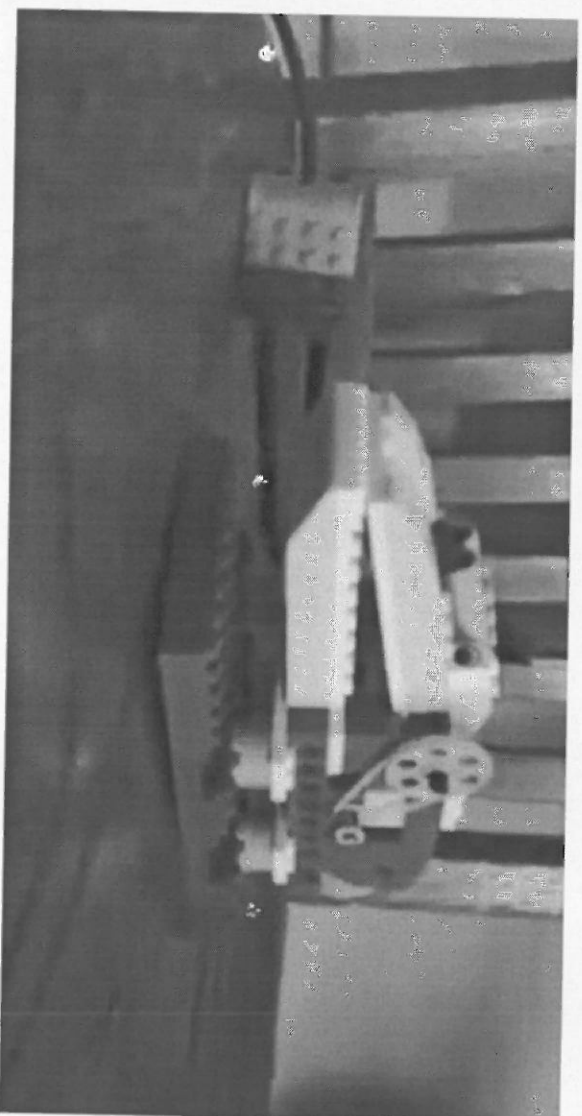STEM Fair hosted at HBMS brought in a wide variety of community members

SAU 41 Vision

- To be able to apply and make use of all the information available at our fingertips
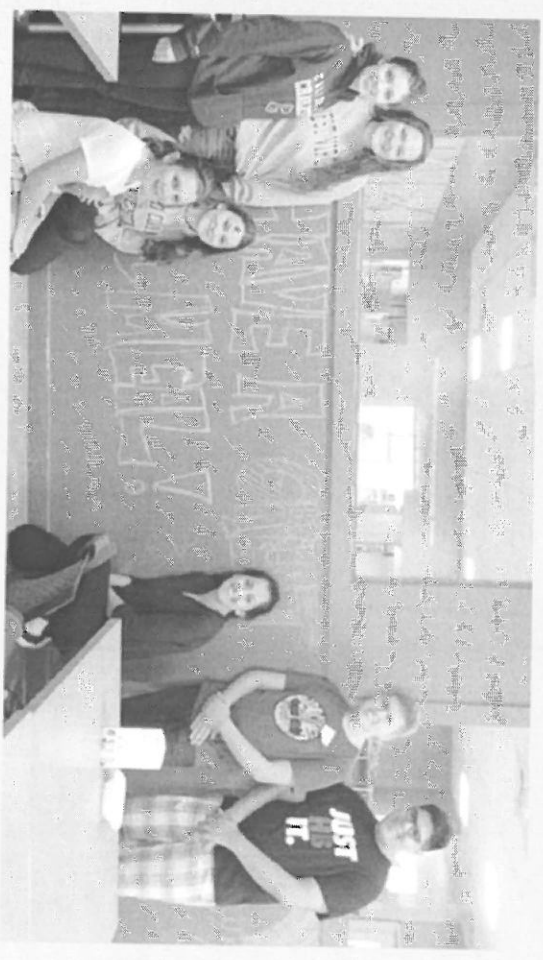
SAU 41 Vision

- Perseverance: to cope with failure and move forward

SAU 41 Vision

·Student Leadership Group

SAU 41 Vision

·College & career ready

How do we get there?

Vision

Strategic Plan

21st Century Skills

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Assessment

Brookline & Hollis

Hollis Brookline COOP

Brookline & Hollis

Hollis Brookline COOP
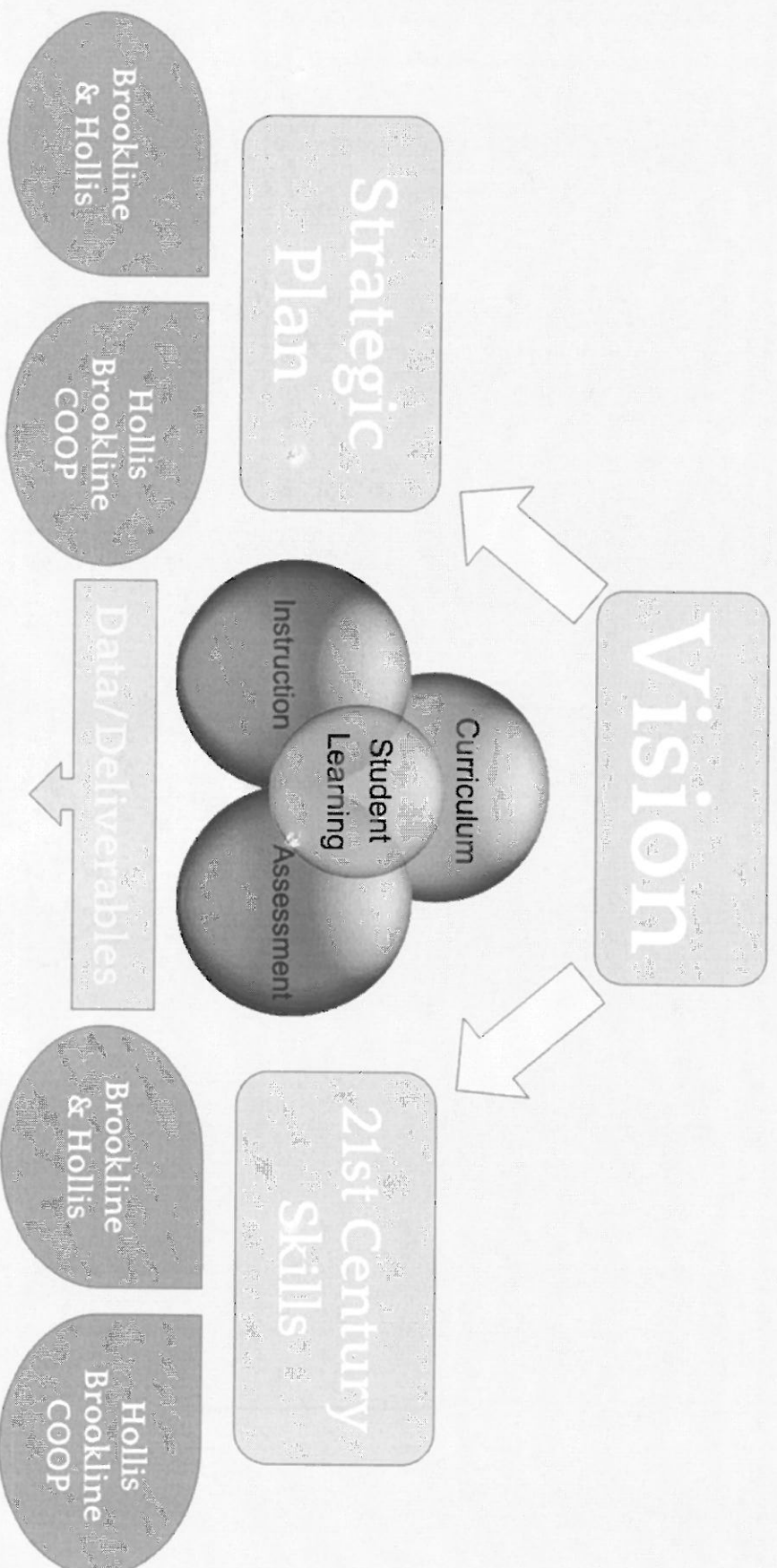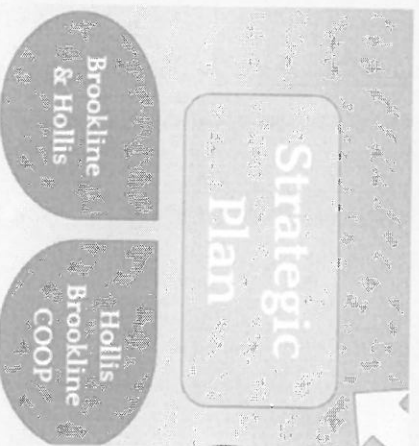
SAU 41 Professional Development

- Providing meaningful & engaging Professional Development in house

Curriculum & Instruction

Strategic Plan

- Brookline & Hollis
- Hollis Brookline COOP

21st Century Skills

- Brookline & Hollis
- Hollis Brookline COOP
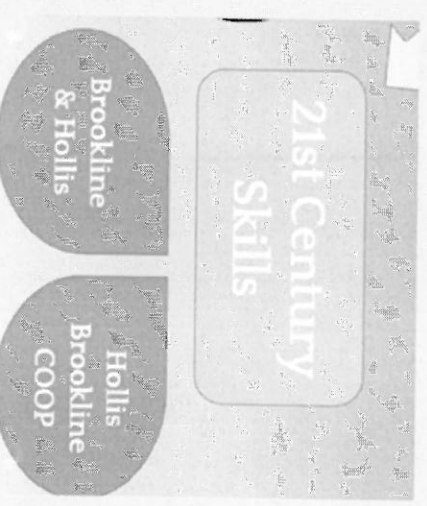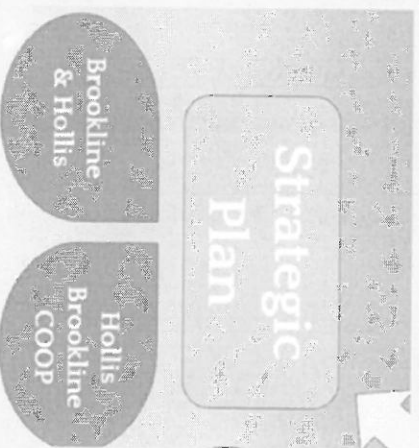
District will ensure C/I are designed and delivered to enable diverse learners to achieve/exceed standards

District will base curriculum development on best practice research

District will continuously raise the level of student achievement

Curriculum & Instruction

Strategic Plan
- Brookline & Hollis
- Hollis Brookline COOP

21st Century Skills
- Brookline & Hollis
- Hollis Brookline COOP

- District will ensure infrastructure supports 21st C teaching & learning
- District will build professional capacity and provide support
- District will integrate/embed 21st C teaching & learning in core subjects
- District will support innovative ideas for improvement

Tying it all together…

Curriculum

Instruction · Student Learning · Assessment

Data/Deliverables
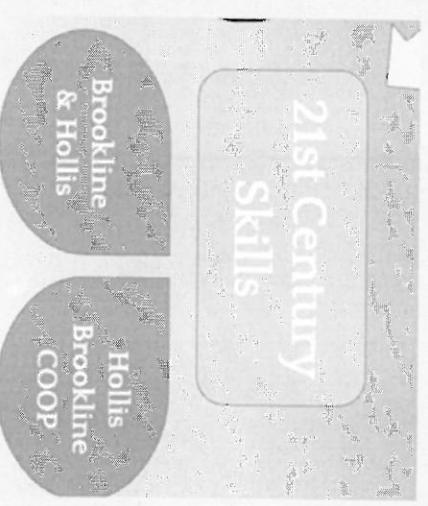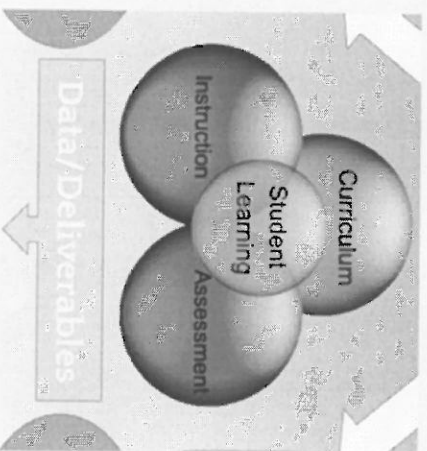
- Ensure horizontal alignment
- Assessments that represent the standards
- Review PreK → 12 vertical alignment to reflect logical progressions
- Identify strengths, needs, & concerns and recommend appropriate revisions
- Using assessment data by […] for curriculum decisions

The outcome…

- Improved student learning
- Graduates equipped with 21st Century skills
- Community participation in process

Curriculum

Student Learning

Instruction

Assessment

Data/Deliverables
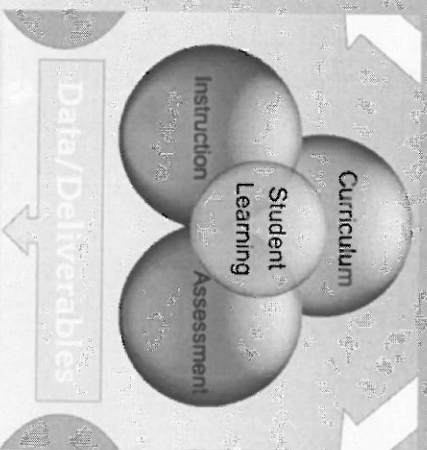
Date: August 10, 2016
To: Hollis School Board
From: Hollis Policy Committee
Re: Policies for August:

The following policies are recommended to be readopted as written. The Hollis School Board Policy Committee recommends they receive a first reading at the August board meeting.

IHBBA - Limited English Proficiency Instruction
Recommendation: Adopt as is

IJOC - Volunteers
Recommendation: Adopt as is

GA - Personnel Goals/Priority Objectives
Recommendation: Adopt as is

GBA - Open Hiring/Equal Employment Opportunity and Affirmative Action
Recommendation: Adopt as is

GBB - Staff Involvement in Decision-Making
Recommendation: Adopt as is

GBCD - Background Investigation and Criminal Records Check
Recommendation: Adopt as is

GBD - Communications with Staff
Recommendation: Adopt as is

GBE - Staff Rights and Responsibilities
Recommendation: Adopt as is

GBEA - Staff Ethics/Conflict of Interest
Recommendation: Adopt as is

GBEBB - Staff Conduct with Students
Recommendation: Adopt as is

GBG- Staff Welfare/Protection
Recommendation: Adopt as is

GBGA - Staff Health
Recommendation: Adopt as is

SAU 41 Technology Initiative Approval Request

(Go to File > Make a copy... for editing)

Title of Technology Project or Program:
Author Contact Information:
School:
Desired Implementation Date:

1. Description of technology request. Explain what other technology was considered and why rejected.

2. Expectation - How will it be used? Will it need to run specific software? Where in the building will it be located? Who will be using this technology? Please include all that apply.

3. Who will be using this technology (Administrators, Prof Staff, Support Staff, Office Staff, Students, Other? Please check all that apply.
Technology users: Check (X) all that apply: Administrator ___   Professional Staff ___   Support Staff ___   Office Staff ___   Students ___   Other ___

4. Does it require additional equipment/accessories? (charging cart, headphones, power supplies, batteries, etc.)

5. Required services: Check (X) all that apply	Printing __ Internet __ Server Access (Z Drive) __ Other __ Google Docs, Google Classroom __

6. Funding?	
Is it budgeted?	
Account line for funding?	
What is the cost per unit and total cost?	
If there is a recurring cost, what amount and how will the cost be funded?	

7. Professional Development - How will Professional Development for staff be delivered? If funding is needed for PD, how will it be funded? Will this purchase need ongoing support (ie creating/deleting accounts/passwords, troubleshooting and maintaining equipment)? If so, who do you see as the person(s) providing this function?

8. Technology Dept - Please discuss with building technical specialist as needed.
Will there be required Professional Development for the tech dept?
How will the PD be funded and delivered?
Will the current network infrastructure support the initiative?
Will additional infrastructure be required in the location hosting the hardware?

9. Ongoing considerations- Will the hardware need to be placed on a replacement cycle? Will an outside consultant be required? What is the life expectancy of the hardware?

Approved SAU41 Technology Devices
https://goo.gl/kvZK0x

Technology Initiative Review Signatures:

Staff Member: _____ Date: _____

Principal: _____ Date _____

District Technical Specialist _____ Date _____

For SAU Office Use Only
Approval Request Process:
Date Received_____ Initials _____

Committee Meeting Date_____

Approved Yes or No Date _____

Reason if not approved: _____

_____

Signatures once approved/disapproved:

Business Administrator_____ Date: _____

Network Administrator _____ Date: _____

Assistant Superintendent _____ Date: _____

Hollis

Network and Technology Report

2016

SAU41 Technology Staff

SAU Central Office

Network Administrator - Richard Raymond (1FTE)

COOP

COOP Technical Specialist - Carol Mamczak (1FTE)
COOP Technical Specialist - Jonathan Reath (1FTE)

Hollis

Hollis Technical Specialist - William Aldrich (1FTE)

Brookline

Brookline Technical Specialist - Mary Albina (1FTE)

Internet Connects at HBHS

Internet - Charter is our ISP

100 MB Coax Router - Managed by Charter.

Barracuda 610 Internet Filter (7/2015)

The Internet is shared by all sites in SAU41 - Fiber bandwidth increased from 150MB to 250 MB - 6/2016

250 MB Fiber Cisco ME Switch - Managed by Charter

Barracuda Firewall (7/2015)

HP Procurve 3500 Core Switch (8/2012)

Wide Area Network

HUES

HPS

HBMS

HP Procurve 3500 Switch
Located at HBHS

All Sites connect to HBHS with
100MB fiber circuits leased
from Charter.

CSDA

RMMS

SAUCO

DSCI Cisco Router - T1 Circuit
VOIP Phones (HPS, HBMS, SAUCO)
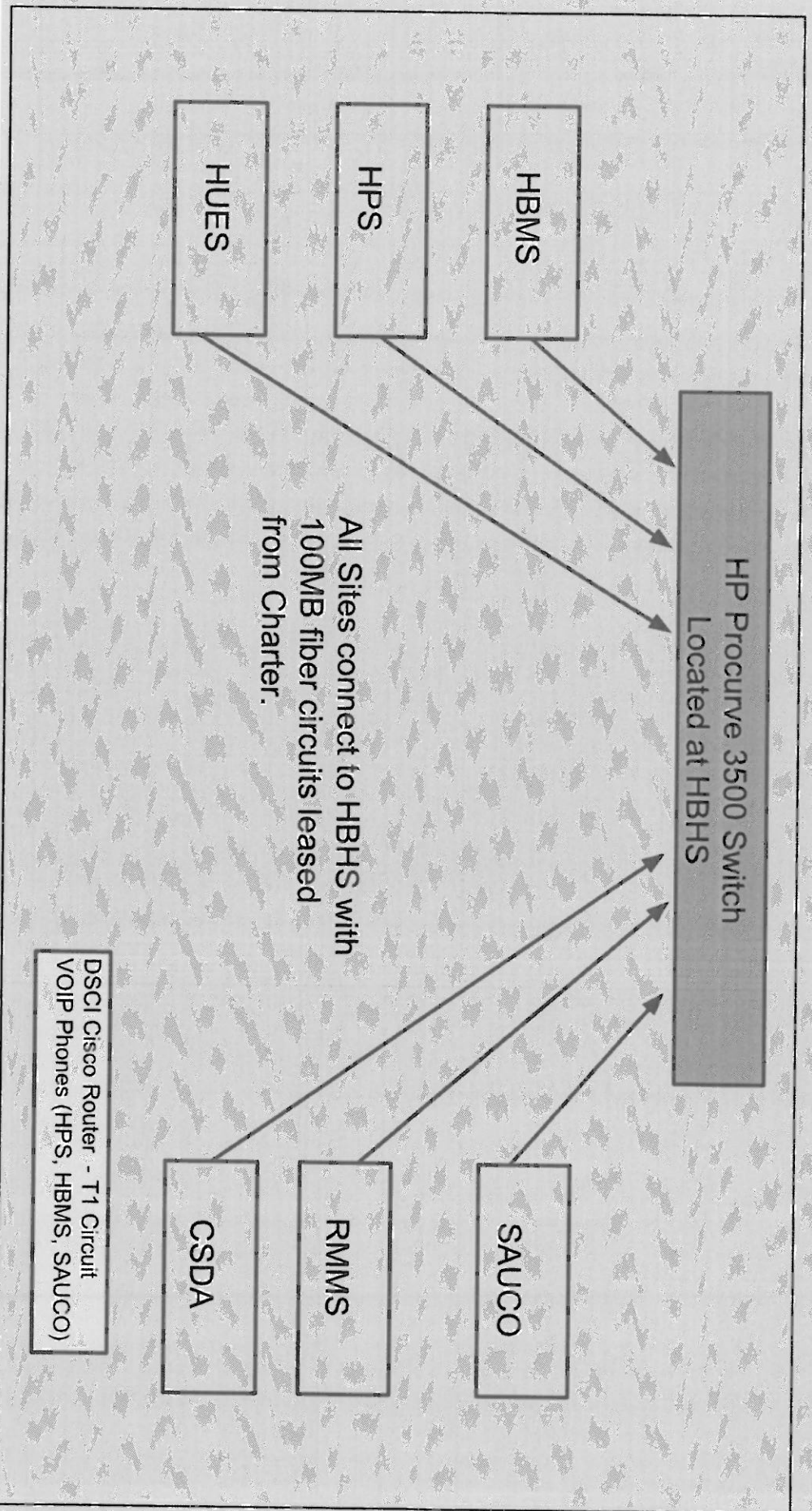
Hollis Upper Elementary School

- Cabling is CAT6 on the lowest level and CAT5E on the upper floors.
  - Single wiring closet on the lowest level
  - No fiber connecting different levels.

- Procurve wireless system with 25 access points. Guest VLAN for BYOD
  - Will be adding 3-5 additional access points this summer.
  - HP has discontinued the Procurve wireless systems since acquiring Aruba.
  - I believe we can easily get 3 to possibly 5 years out of the current system.
  - Budget for an Aruba Instant system. Cost is about $20,000.00
  - 30 access points ($500.00) and upgrade POE switches ($1,300.00) - wireless would be the new AC standard and GB speed.
  - Drivers of the timeline will be performance of the current system and HP declaring the "end of life" status for the Procurve access points.

- HP Procurve Switches - Most were deployed in 2011, two in 2015
  - 3 are GB and 5 are 100MB
  - There are 2 POE switches to power the access points.
  - No fiber between the floor levels
  - Data and BYOD VLANs

- 20 Printers. (14 networked, 6 local)
  - Looking into PaperCut print management system.

- Servers
  - VMWare on HP Proliant. Microsoft Server 2008 R2 Domain Controller. Deployed 7/2010
  - Microsoft Server 2003 - SOPHOS Server(anti-virus) being upgraded this summer.

- Purchased Meraki Mobile Device Management software. (MDM)
  - Cloud based software that manages iPads and Android based tablets.

- Exploring Chromebooks as a cost effective laptop solution.
  - 14" HP model is about $245.00
  - 11" Lenovo is about $179.00

- Phones are POTS lines.
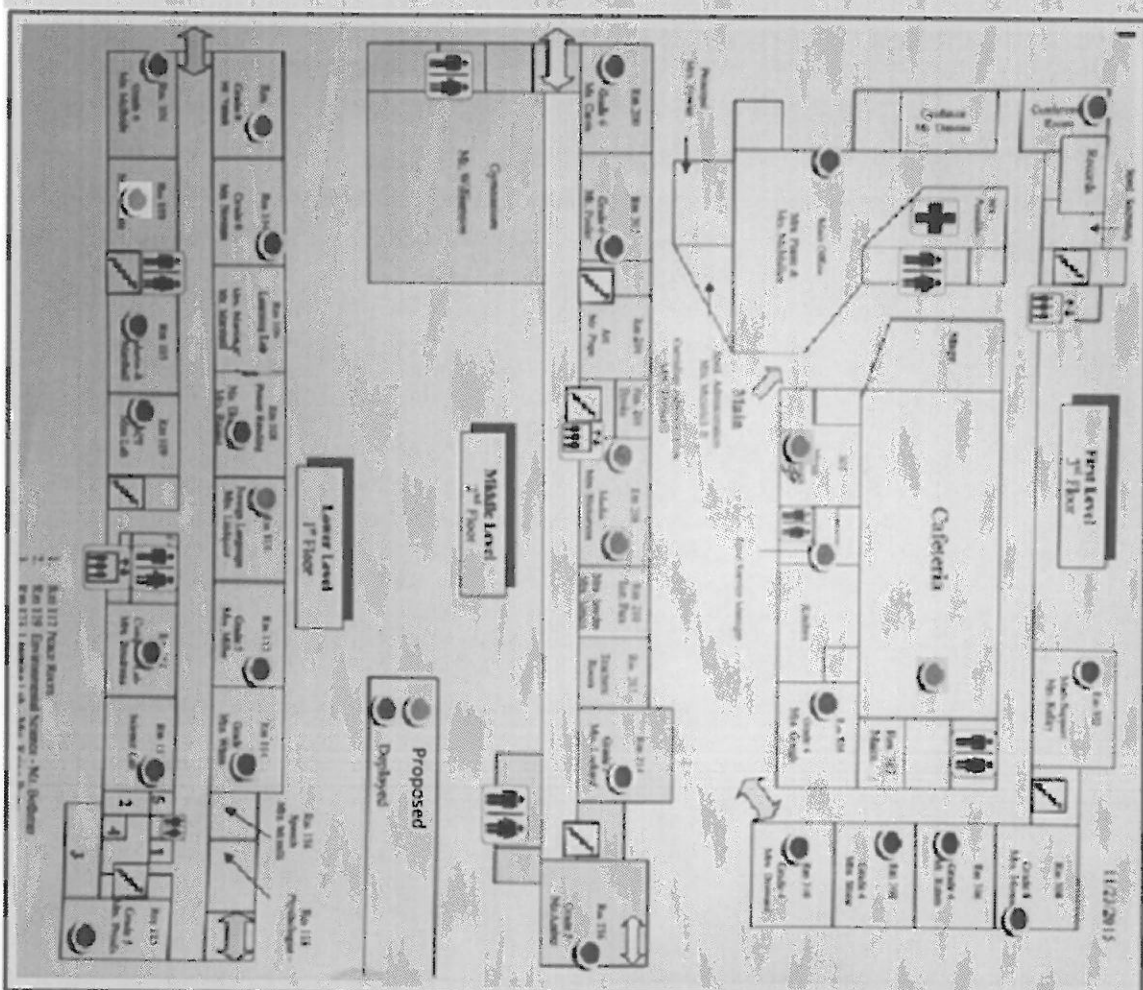
Hollis Primary School

- Cabling is CAT5 and 5E which was installed 16+ years ago.

- Aruba Instant wireless system with 28 access points.
  - Adding 7 more this summer bringing the total to 35. (3 in K, 1 Cafeteria, 1 in 2nd Gr, 1 in 3rd Gr, Art)
  - BYOD network which is used by the staff.

- HP Procurve Switches (2 - 7 years in age)
  - 4 GB switches (120 ports)
  - Six 100MB switches (264 ports)
  - 3 POE switches to power the phones and APs. (120 ports)
  - There is no fiber between the various parts of the building.
  - Data and voice VLANs

- Phones are hosted VOIP and connect through the data network. 48 Polycom phones.
  - Voice traffic is routed through CSDA in Brookline.

- 14 Printers

- Servers
  - 2008 R2 Domain Controller on HP server running VMWare. Deployed 7/2010
  - 2008 R2 Print Server on same HP host as the Domain Controller.

Hollis Primary School
2015-2016

1st Floor

Main Entrance

Speech - 30A

Mrs. Banks, Merrill ELL

Rm 101

Mr. Lewis

Mrs. Goldman

Miss Lescault 307

Rm 100 & Del's 30?

Reading 30?

Mrs. Anne McLaughlin

Rm 102

Mrs. Nai 0

B Office 303

Carl Room Elli

Faculty Room 305

A

Rm 111

Mrs. Env 30?

306 Phone Room

A Mrs. Izbicki - 30?
B Mrs. Walker

Library/Media Center

Mrs. Schibanoff - 312 & 314

Coordinators
Nicole Tomaselli
Colleen Masavich
313

Rm 109
Mrs. Gui

Mrs. Shea

Faculty Lounge

Rm 114

Mrs. Nabe

Rm 106

Custodians 309

Mrs. VanSchaick
Mrs. Pickowicz

Rm 116
Art
Mrs. Rosseau

Kitchen
Ms. Hogan - 320 Office

Rm 119

Mr. Kane
Mr. ...
Korea

B

4

3

Rm 201
Mrs. Currier

Rm 115
Music
Mrs. Cormier

Gym/Cafeteria
Mr. D. Olszewski

6

7

5

2

Rm 117
Maker Space

Rm 118
El

Rm 120
Mr

PE Office - 319

2nd Floor

Rm 310
Mrs. St Hilaire
Psychologist

Rm 205
Mrs. O'Brien

Rm 20?
Mrs. O'Brien

Rm 202
Mr. Ostro

Hanzmacio
Mr.
Mr.

Rm 20?

N

Rm 20?

Miss Banks

Rm 311
Mrs. Walker

Rm 20?
Mrs. Somersong

Deployed

Proposed

District Wide Data Services

- File Server is shared by all sites. (HBHS) Deployed 7/2012 - Was virtualized this summer.
  - Goal is to start to move non confidential data to the cloud.

- Food Services server shared by all sites (HBHS) Deployed 7/2013 - VMware Microsoft Server 2008 R2
  - POS computers were upgraded in Hollis and Brookline this summer.

- Student information system is PowerSchool and is hosted (Cloud)
  - Parent Portal enabled for all schools - primarily used in the COOP
  - Student Portal enabled for grades 7-12
  - Alert Solutions is the parent notification system and is embedded in PowerSchool.
  - InfoSnap for online registration implemented 8/2015. Went live on July 22nd for the 16-17 school year.
  - Online report card being developed this summer primarily for COOP but will find it's way to elementary schools.
  - PowerSchool auto updates Cafeteria, Health, and Destiny(library) databases.

- HealthSnap - Nurses database system (Cloud)

- Infinite Visions (BudgetSense) server is shared by all sites
  - Updated 3/2016
  - Located at HBHS - on generator backup
  - Microsoft Server 2012
  - VMWare
  - Backs up to HBMS every night and to cloud storage once a week. VMWare image is backed up every night.

Data Services cont.

- Email is hosted by Google - GAFE (Cloud)
  - Staff have email
  - Student email grades 4-12 with sau41.org access only
  - Google Classroom is activated for all schools. Most active in grades 4 - 12.

- Naviance - guidance software for college applications (Cloud)

- Dell Kace Network Management Device services all sites. Deployed 11/2013
  - Applies OS patches and other software installs.

- Web Presence
  - SAU41.ORG is hosted with HostGator running on the Joomla platform
  - School sites are on Google
  - Staff sites are on Google
  - The sau41.k12.nh.us domain still has active pages linked from sau41.org and is running on an internal 2003 virtualized web server.
  - Domains are registered with GoDaddy through 10/2022

- Anti-Virus - SOPHOS
  - HBHS server manages HBHS, HBMS, and SAUCO
  - HUES server manages HUES and HPS
  - CSDA server manages CSDA and RMMS
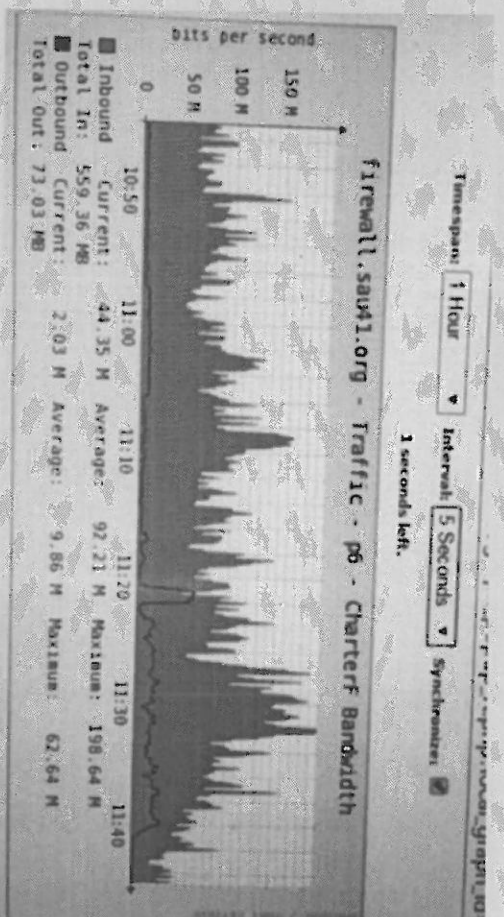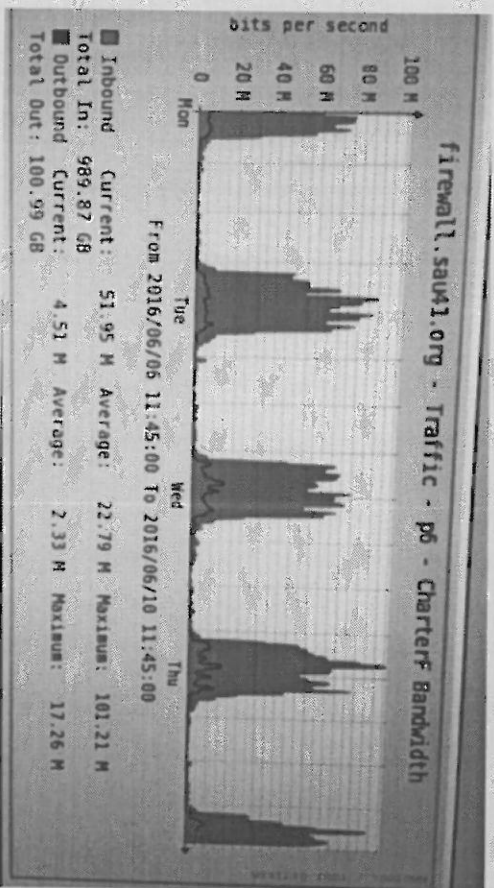
- Intronis Cloud Backup.

  Infinite Visions, Cafeteria, and Key FOB VMWare images are backed up nightly.

  SQL data is backed up to HBMS M-F and to the cloud weekly.

  We have 100GB of cloud storage. Currently using about 70GB

  Cloud data is encrypted.

- Monitor bandwidth use - increased to 250MB on June 1, 2016

firewall.sau41.org - Traffic - p6 - Charterf Bandwidth

bits per second

From 2016/06/05 11:45:00 To 2016/06/10 11:45:00

	Current:	Average:	Maximum:
Inbound	51.95 M	22.79 M	101.21 M
Total In: 989.87 GB			
Outbound	4.51 M	2.33 M	17.26 M
Total Out: 100.99 GB			

Timespan: 1 Hour   Interval: 5 Seconds   Synchronize:

1 seconds left.

firewall.sau41.org - Traffic - p6 - Charterf Bandwidth

bits per second

	Current:	Average:	Maximum:
Inbound	44.35 M	92.21 M	198.64 M
Total In: 559.36 MB			
Outbound	2.03 M	9.86 M	62.64 M
Total Out: 73.03 MB			

- WebSense employee portal server is shared by all sites. (HBMS) Deployed 2/2011 - Microsoft Server 2008 R2
  - extended warranty purchased in February 2016. In the process of being upgraded and virtualized this summer on new hardware.

Ongoing and Future Considerations

- Continue to evaluate desktops and laptops for replacement cycle.

- Update switches to GB

- Monitor and increase Wireless at both locations as needed for total saturation of buildings.

- Consider adding fiber to connect different sections of the buildings.

- Add AC in the server room at HPS (for reference both HBMS and HBHS were replaced for $10K)

Implementation Plan that is built off the work of the 21st Century Committee.

- Develop a unified K-12 vision for technology's role in delivering curriculum.
  - Google Classroom's role.
- Standardize Devices - laptops, tablets, Chromebooks and how they will deliver curriculum.
  - BYOD
  - Continue with a combination of BYOD, laptop/tablet carts, and desktop labs.
- Develop a process for an approved suite of software applications. This is already in place for hardware. <u>Tech Initiative Form</u>
- Standardize peripherals such as projectors, document cameras, and develop a replacement plan. (ex: buying the same projector standardizes bulb purchases)
- Network Infrastructure upgrades
  - Wireless IEEE 802.11ac - over time TBD
  - CAT 6 (way down the road)
  - GB switches - over time TBD

- Monitor and evaluate any needs to increase WAN (Charter) to GB (current cost for 100MB is $357.00 per month per site) We had an annual review meeting on July 12 with Charter and have asked for pricing to explore the options.

- Monitor Internet bandwidth. 250MB as of June 1, 2016 (we were at 50MB 3 years ago)

- Evaluation and replacement cycle for all technology. (ex: projectors) Includes redeployment of upgraded hardware whenever possible. (ex: SAUCO desktops going to Cafeteria POS stations)

- Training and PD for staff - Hollis has Integration Specialists which is a huge help.

- Data retention policy

End

Funding Considerations

Laptop - $523.00

Desktop - $500.00

iPad $405.00 (includes case)

Android Device $279.00 *

Chromebook $170 to $260

Kindle $70 to $180 *

Fiber - $1.50 per foot plus labor.

Aruba 205 AC Wireless Access Point $550.00 (ongoing cost of $17.00 per year per device)

HP Procurve 2920 24 port POE switch $1350.00

MDM licensing - $8.00 per device per year. Meraki and Google.

* Difficult to manage in an enterprise environment