PORTSMOUTH TECHNOLOGY GOALS

• Technology to support Student Achievement and prepare students for the future

• Technology to support Teacher Instruction and professional development

• Technology to support efficient Administrative Functions and for use as a cost savings measure
PSD-IT SUPPORT STRUCTURE

- Superintendent
- IT Director
  - Network Administrator
  - Systems Administrator
  - Technology Integration
  - Support Specialist (3)
These seven positions support

- 5 buildings connected through Fiber VRF cloud provided by COX
- Secure Enterprise Network Infrastructure
- Modern Systems and Instructional Peripherals
- 4000 Users

And

- Too many software programs/subscriptions to count!
- Note: July 1, 2013 to present - 575 closed work order tickets!
Minimum standards for classroom technology that are necessary for every classroom in our schools (hardware):

- Laptop/Netbook for every teacher
- Device for every student (1:1, BYOD)
- Interactive whiteboard for every classroom
- One LCD projector in every classroom
- One document camera in every classroom
TECHNOLOGY INTEGRATION

- Technology use increases efficiency and productivity, provides fast and easy access to information and data, and reinforces and enhances academic lessons.

- Classroom content is aligned with content standards and technology standards.

- District Technology Integration Specialist works with teachers and staff to ensure that technology expectations are being met and to provide training, guidance, and support.

- Virtual High School: Students have access to unique courses that might not be available at Portsmouth High/Middle School. VHS minimizes course scheduling conflicts.
TECHNOLOGY CURRICULUM

- Technology content at the elementary level is taught by the Library Media Specialist.

- Technology content at the middle and high school level is taught in formal technology classes.

- Technology curriculum is reinforced in the content classes through integration.

- All technology curriculum is aligned to the ISTE/NETS Standards, American Association of School Librarians Standards for the 21st Century Learner and Massachusetts Technology Standards.

- Technology curriculum is evaluated and updated annually by Technology Curriculum Committees at each level.
PROFESSIONAL DEVELOPMENT

• During the 2010-11 school year a technology assessment was given to teachers to identify training needs and drive professional development.

• Training is available to faculty and staff before, during, and after school. District/school wide technology training needs are determined by school leadership, Technology Integration Specialist, and the IT department. Training opportunities are posted on the IT department training and activity calendar:

• Teachers and staff may request training anytime by submitting a Spiceworks tech request.

• Technology resources and support material are posted in SharePoint and on the “Teacher Resources” web page.

• Training from outside the district is provided on an as-needed basis via WebEx and or onsite.
PSD CORE NETWORK

ISP

Portsmouth Middle School
PMS Cisco ISR 2921

Portsmouth High School
PHS Cisco ISR 2921

Howard Hathaway School
Hathaway Cisco ISR 2921

Portsmouth Admin Building
Admin Cisco ISR 2921

Melville School
Melville Cisco ISR 2921

Redundant Fiber Ring Provided by Cox Communications
TELEPHONES

• Each site has its own Toshiba phone system. (CTX-100 and CTX-670)

• Connected to local Verizon lines

• Linked together with VoIP using Cox Fiber ring (OSHEAN)

• Allows sites to 4 digit dial each other and

• Share a common VoiceMail server located at PHS
PSD HARDWARE INFRASTRUCTURE

- HP Blade Centers (2) with HP Blades (6)
- HP ProLiant Physical Servers (6)
- Apple Servers (2)
- Dell PowerEdge Server (3)
- HP Gigabit Managed Switches Layer 2 (19)
- HP Gigabit Managed Switches Layer 3 (13)
- HP Gigabit POE Managed Switches (10)
- HP MSM765 Wireless controller supporting 137/160 Access Points District-Wide
- Cisco 2921 integrated services router (4)
- APC Uninterrupted Power Supplies with Network Management (11)
PSD SOFTWARE INFRASTRUCTURE

- Windows 2008 R2 Domain Controllers (4)
- VMware 5.x Hosts (8) supporting 55+ virtual machines
- SolarWinds Network Protection Manager
- Windows 2008 R2 Virtual Servers
- Windows 2012 Virtual Servers
- Veeam Backup and Replication V7 and Symantec Backup Exec 2010 R3
DISTRICT SERVER BACKUP AND REPLICATION

High School Data Center Hosts:
- Admin Building
- High School
- Hathaway
- Melville

Middle School Data Center Hosts:
- Middle School
SYSTEMS AND PERIPHERALS

- Windows Systems
  - 330+ Teacher Laptops
  - 425+ Mobile Lab Laptops
  - 75+ Touchscreen Netbooks
  - 575+ Desktop Computers
  - 40+ Thin Client Terminals
  - 55+ Virtual Desktops

- Apple Systems
  - 110+ Apple Laptops
  - 165+ Apple Desktops

- Printers and Copy Machines
  - 58+ Networked Laser Printers
  - 18 Networked Multifunction Copiers
**CURRENTLY SUPPORTED MODELS**

**Windows Desktop (7 Models)**
- Hewlett Packard DC5700
- Hewlett Packard DC5800
- Dell Optiplex 780
- Dell Optiplex 790
- Dell Optiplex 3010
- Dell Optiplex 7010
- UTC Retail

**Thin Clients (2 Models)**
- HP t5630w
- HP t5730

**Apple Models (8 Models)**
- Macbook
- Macbook Pro
- Macbook Pro Retina
- Macbook Air
- X-Server G5
- iMac
- Mac Mini
- iPad

**Windows Laptops (9 Models)**

**Dell Models - 8**
- Dell Duo
- Dell Latitude E5400
- Dell Latitude E5410
- Dell Latitude E5420
- Dell Latitude E5430
- Dell Latitude E5530
- Dell Latitude E6500
- Dell Latitude E6510

**HP Models - 1**
- HP ProBook 4510s
All Domain Windows Systems are currently running

- Windows 7 Professional X86
- Microsoft Office 2010
- Internet Explorer 9/10
- All windows systems are currently imaged, updated, and have their software deployed by Microsoft System Center 2012

All Apple Systems are currently running

- OSX 10.5 - 10.8
- Microsoft Office 2011
- Adobe CS6 Suite
- iLife Suite
- All Apple systems are managed and monitored by our Apple X-Server running Apple Remote Desktop 3.6
PERIPHERALS

High School

• Projectors
  • 40+ Digital Projectors
  • 40 Epson 455Wi/475Wi Interactive Projectors
    • - Science, Math, English, Social Studies Wings Complete
    • - Art Media, Foreign Language Next
• Document Cameras
  • 45+ Document Cameras
• Printers/Copiers
  • 6 Multifunction Savin Copiers
  • 35 Networked Laser Printers
PERIPHERALS

Middle School

• Projectors
  • 75+ Digital Projectors
  • 20 Polvision Interactive Whiteboards
• Document Cameras
  • 75+ Document Cameras
• Printers/Copiers
  • 5 Multifunction Savin Copiers
  • 15 Networked Laser Printers
Melville

- Projectors
  - 23 Digital Projectors
  - 15 Mimio Interactive Whiteboards
- Document Cameras
  - 17 Document Cameras
- Printers/Copiers
  - 2 Multifunction Savin Copiers
  - 4 Networked Laser Printers

Hathaway

- Projectors
  - 23 Digital Projectors
  - 20 Mimio Interactive Whiteboards
- Document Cameras
  - 21 Document Cameras
- Printers/Copiers
  - 3 Multifunction Savin Copiers
  - 4 Networked Laser Printers
PSD-IT
MAKING IT HAPPEN!!

Q/A