

Initial Classroom Outfitting – Proposed Configurations FY2014 RESOLUTION “A” Technology Projects

Note: The below configurations are approximations for project description purposes only. A final assessment of the school’s requests and needs will dictate the final equipment proposal and SOW.

To achieve the highest level of instructional functionality in an integrated classroom/ computer environment, the following base model configurations have been developed in order to maximize classroom potential in the Resolution A program. Each configuration below has a minimum cost of \$35,000 with all equipment possessing a minimum useful life of 5 years. All configurations are modeled so that each individual hardware component is integrated into one another, connected to the school’s backbone infrastructure via the school network, and works interdependently within the model as a “system”.

Base Model Configuration – Stationary Classroom/Library Technology Environment



(a) Stationary classroom technology environment

The instructional stationary classroom technology environment enables peer-to-peer (used to describe a Local Area Network in which printers and files on any computer on the LAN can be shared by other computers also on the LAN) and internet connected computer usage within a classroom while maintaining the basic instructional classroom space and setup.

The following requirements are ensured by the Resolution A project office team:

- Pre-existing electrical and physical data cabling is available in the classroom to support the hardware.
- All computer hardware is interconnected and able to print to the LAN printer, to communicate each other, and access the school’s network and Internet.
- Internet connectivity requirements are met using peer-to-peer and hardwired integration to the school network.
- Printing facilities, where available, are provided using a hardwired connection to a network printer shared on the LAN.

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RESO A FUNDING (\$35,000) +

Configuration # 1a - Stationary Classroom/Library Technology Environment

Consist of 4-6 rooms with:

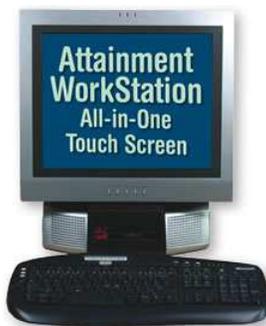
- (2-4) Instructional/Advanced desktop computers (MAC or WINDOWS platform)
- (1) Network B&W or color laser printer
- Lockdown devices for (2-4) desktop computers
- Peripherals – switches, patch cables, connectors
- The equipment will be setup and secured into existing computer desks with adequate support specifications or recessed monitor workstation to allow for dual usability of a classroom/computer environment.
- All new equipment will be configured and tested for printing and Internet access, where available.

Configuration # 1b - Stationary Classroom/Library Technology Environment - Assistive Learning for Special Education Needs

Consist of 4 rooms with:

- (2) Attainment Touch Screen workstations
- (2) Adaptive clicking devices (where required)
- (1) Network B&W or color laser printer
- Peripherals – patch cables, connectors
- The equipment will be setup and secured into existing computer desks with adequate support specifications or recessed monitor workstation to allow for dual usability of a classroom/computer environment.
- All new equipment will be configured and tested for printing and Internet access, where available.

Touch Screen capable



“Jelly Bean” Clicker



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Configuration # 1c - Mobile Classroom/Library Multi-User Environment - Assistive Learning for Special Education Needs

Consist of 4 rooms with:

- (1) Interactive Table (includes touch enabled LCD display and user applications)
- The equipment will be setup into classroom environment



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Configuration # 1d - Mobile Classroom/Library Multi-User Environment - Assistive Learning for Special Education Needs

Consist of 2 rooms with:

- (1) Interactive assistive learning center using ‘intended touch’ (includes touch enabled LCD display and user applications)
- The equipment will be setup into classroom environment



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**Base Model Configuration –Interactive White Board
Presentation/Multi-Media Station**



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(a) Wall mounted all-in-one white board unit



Copyright 2012 SMART Technologies ULC. All rights reserved.

(b) Floor stand white board unit



Copyright 2012 SMART Technologies ULC. All rights reserved.

(c) Airliner wireless slate used by a teacher



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(d) Senteo student interactive response system

The stationary interactive white board presentation station enables integrated computer instruction within the classroom. This model enables teachers and students to annotate and control presentations, document class notes that can be saved electronically and sent via email or stored on the school’s network, and display and interact with an internet session on a large scale for student instruction. An optional wireless slate device is available for wireless communication with the white board by the teacher and students additionally optional student polling devices also available for classroom voting and response interaction.

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The following requirements are ensured by the Resolution A project office team:

- Pre-existing electrical and physical data cabling is available in the classroom to support the hardware.
- All computer hardware is interconnected and able to print to the LAN printer, to communicate each other, and access the school’s network and Internet.
- Teacher workstation connects to interactive white board presentation station either hardwired or via Bluetooth wireless connection.
- Projection setup configured and integrated for use with the interactive white board.
- Department of School Facilities (DSF) prerequisites for wall mounted setup are followed for asbestos clearance.

RESO A FUNDING (\$35,000) +

Configuration # 2a - Interactive White Board All-In-One Presentation/Multi-Media Station

Consist of 4-6 rooms with:

- (1) 64” or larger interactive white board (all-in-one white board/projector)
- (1) Wall mounting rail device or floor stand for interactive white board
- (1) Instructional/Advanced desktop computer teacher station (MAC or WINDOWS platform)
- (1) Lockdown device for desktop computer
- Interactive white board peripherals – Bluetooth connector, speakers, polling systems & wireless slate (optional)
- The equipment will be setup and secured into a teacher desk with adequate support specifications or recessed monitor workstation to allow for dual usability of a classroom/computer environment.
- All new equipment will be configured and tested for Internet access, where available.

Configuration # 2b - Interactive White Board Presentation /Multi-Media Station

Consist of 4-6 rooms with:

- (1) 64” or larger interactive white board
- (1) Wall mounting rail device or floor stand for interactive white board
- (1) Projector
- (1) Projector/AV cart (equipped with a media player and audio setup)
- (1) Instructional/Advanced desktop computer teacher station (MAC or WINDOWS platform)
- (1) Lockdown device for desktop computer
- Interactive white board peripherals – Bluetooth connector, polling systems & wireless slate (optional)
- The equipment will be setup and secured into a teacher desk with adequate support specifications or recessed monitor workstation to allow for dual usability of a classroom/computer environment.
- All new equipment will be configured and tested for Internet access, where available.

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Base Model Configuration – Stationary Computer Lab Upgrade



(a) Windows classroom computer lab upgrade



(b) Mac classroom computer lab upgrade



(c) Ceiling mount projector (minor cabling & electrification)



(d) Classroom lab reconfiguration (minor cabling & electrification)

The stationary computer lab upgrade includes the hardware upgrade of a pre-existing dedicated computer lab outfitted with functioning data and electrical cabling for 30+ student workstations. In cases where the school requires the addition of minor cabling & or electrification to reconfigure the pre-existing lab, a survey will be conducted to plan the classroom space and accommodate the necessary electrification in order to support the hardware.

The following requirements are ensured by the Resolution A project office team:

- Pre-existing electrical and physical data cabling is available in the classroom to support the hardware.
- In cases where minor cabling and electrification is required, the Reso A office will conduct an additional site survey to determine scope and configuration requirements as well as cost impact.

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- Workstations are configured to communicate with the available printers, scanner and other peripheral devices as well as the dedicated file server (where available).
- All hardware devices including peripherals are secured to pre-existing or new computer furniture.
- Teacher workstation connects to interactive white board presentation station (where available) either hardwired or via Bluetooth wireless connection.
- Projection setup configured and integrated for use with the interactive white board (where available).
- Department of School Facilities (DSF) prerequisites for wall mounted setup are followed.

RESO A FUNDING (\$50,000) +

Configuration #3a - Classroom Lab upgrade (Existing electrical & data cabling)

Consist of:

- (32) Instructional/Advanced desktop computers (MAC or WINDOWS Platform)
- (1) Advanced teacher station (MAC or WINDOWS Platform)
- (1) File server (MAC or WINDOWS Platform)
- (1) Network B&W laser printer
- (1) Network Color laser printer
- (1) Flatbed scanner or document camera
- Peripherals – switches, patch cables, surge protectors
- Cables and lockdown devices will be provided for all equipment purchased with this configuration. This equipment will be setup and secured to existing furniture in the computer lab.
- All new equipment provided with this configuration will be configured and tested for printing and the Internet, where available.

Configuration #3b - Classroom Lab upgrade – Assistive Learning for Special Education Needs (Existing electrical & data cabling)

Consist of:

- (15) Attainment Touch Screen workstations
- (1) Advanced teacher station
- (15) Adaptive clicking devices (where required)
- (1) Network B&W laser printer
- (1) Network Color laser printer
- (1) Flatbed scanner or document camera
- Peripherals – switches, patch cables, surge protectors
- Cables and lockdown devices will be provided for all equipment purchased with this configuration. This equipment will be setup and secured to existing furniture in the computer lab.
- All new equipment provided with this configuration will be configured and tested for printing and the Internet, where available.

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Configuration # 3c - Classroom Lab upgrade - virtualized multi-user, PC only (Existing electrical & data cabling)

Consist of:

- (5) Advanced high performance desktop computer/server (WINDOWS platform only)
- (35) 4 or 6-station user access device module
- (35) 17” Monitors, Keyboards, Mice
- (1) Advanced teacher station (WINDOWS Platform)
- (1) File server (WINDOWS Platform)
- (1) Network B&W laser printer
- (1) Network Color laser printer
- (1) Flatbed scanner or document camera
- (1) 64” or larger interactive white board (all-in-one white board/projector)
- (1) Wall mounting rail device or floor stand for interactive white board
- Peripherals – patch cables, connectors
- Interactive white board peripherals – Bluetooth connector, speakers
- The equipment will be setup and secured into existing computer desks with adequate support specifications or recessed monitor workstation to allow for dual usability of a classroom/computer environment.
- Expands capacity of one computer to 4-6 users, each student has their own keyboard, screen, settings, applications, and data files.
- All new equipment will be configured and tested for printing and Internet access, where available.

Configuration # 3d - Classroom Lab upgrade - virtualized multi-user portal interface, PC only (Existing electrical & data cabling)

Consist of:

- (1) high performance server - 100 user, upgradeable (WINDOWS platform only)
- (35) 17” Monitors, Keyboards, Mice
- (2) Network B&W laser printer
- (1) Network Color laser printer
- (1) Flatbed scanner or document camera
- (1) 64” or larger interactive white board (all-in-one white board/projector)
- (1) Wall mounting rail device or floor stand for interactive white board
- Peripherals – patch cables, connectors
- Interactive white board peripherals – Bluetooth connector, speakers
- The equipment will be setup and secured into existing computer desks with adequate support specifications or recessed monitor workstation to allow for dual usability of a classroom/computer environment.
- Customized portal for centralized point of access where teachers and students login to see a customized, dynamic desktop from which all applications can be easily accessed from any station.
- All new equipment will be configured and tested for printing and Internet access, where available.

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RESO A FUNDING (\$75,000 - \$100,000) +

Configuration # 4a - Classroom Lab – Full Integration (Existing electrical & data cabling)

Consist of:

- (32) Instructional/Advanced desktop computers (MAC or WINDOWS Platform)
- (1) Advanced teacher station (MAC or WINDOWS Platform)
- (1) File server (MAC or WINDOWS Platform)
- (2) Network B&W laser printer
- (1) Network Color laser printer
- (1) Flatbed scanner or document camera
- (1) 64” or larger interactive white board (all-in-one white board/projector)
- (1) Wall mounting rail device or floor stand for interactive white board
- (1) Cisco Catalyst switch w/ GBIC modules (where required for MDF/IDF expansion)
- Peripherals – switches, patch cables, connectors
- Interactive white board peripherals – Bluetooth connector, speakers, polling systems & wireless slate (optional)
- Cables and lockdown devices will be provided for all equipment purchased with this configuration.
- This equipment will be setup and secured to new furniture in the computer lab or into a recessed monitor workstations to allow for dual usability of a classroom/computer lab environment.
- All new equipment provided with this configuration will be configured and tested for printing and the Internet, where available.

RESO A FUNDING (\$150,000) +

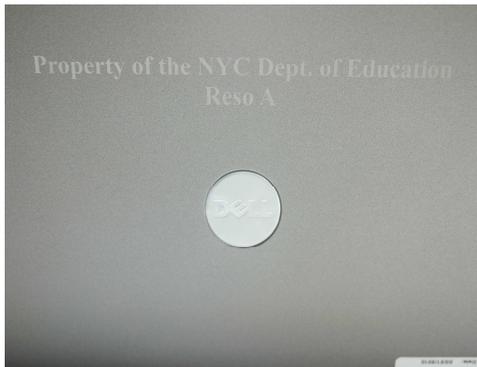
Configuration # 5 - Minor Electrification/Data Cabling & Classroom Lab – Full Integration

Consist of:

- (32) Instructional/Advanced desktop computers (MAC or WINDOWS Platform)
- (1) Advanced teacher desktop (MAC or WINDOWS Platform)
- (1) File server (MAC or WINDOWS Platform)
- (2) Network B&W laser printer
- (1) Network Color laser printer
- (1) Flatbed scanner or document camera
- (1) 64” or larger interactive white board (all-in-one white board/projector)
- (1) Wall mounting rail device or floor stand for interactive white board
- (1) Cisco Catalyst switch w/ GBIC modules (where required for MDF/IDF expansion)
- Peripherals – switches, patch cables, connectors
- Interactive white board peripherals – Bluetooth connector, polling system, wireless slate (optional)
- (1) Ceiling mounted projector (*electrification, mounting, etc*) (not required for all-in-one white board units)
- Upgrading electrical/cabling in the lab to support higher capacity or changing the lab electrical/cabling layout configuration can be completed with this option with approval from the DIIT and DOE.
- Cables and lockdown devices will be provided for all equipment purchased with this configuration.
- This equipment will be setup and secured to new furniture in the computer lab or into a recessed monitor workstations to allow for dual usability of a classroom/computer lab environment.
- All new equipment will be configured and tested for printing and Internet access, where available.

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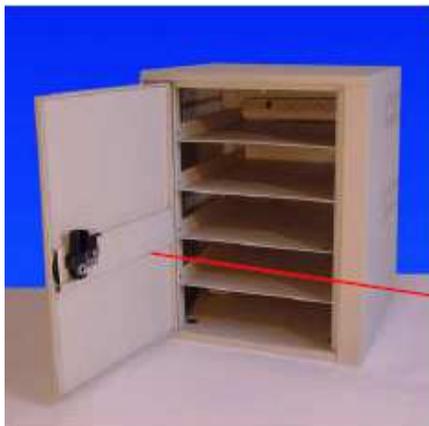
Base Model Configuration – Wireless Classroom Technology Environment



(a) Asset branded Reso A workstation



(b) Configuration #1w set-up (16-units)¹



(c) Configuration #2w set-up (5-units)²



(d) Configuration #3w set-up (20-units)²

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The instructional wireless classroom technology environment enables wireless peer-to-peer (used to describe a Local Area Network in which printers and files on any computer on the LAN can be shared by other computers also on the LAN) and internet connected computer usage within a classroom while maintaining the basic instructional classroom space and setup. This set-up provides the ideal solution for schools and classrooms with limited space and or electrical/data cabling limitations.

The following requirements are ensured by the Resolution A project office team:

- Wireless classroom technology environments can be used in a variety of classrooms independent of the limitations of pre-existing electric (wireless data access is required).
- Internet connectivity requirements can be met using a combination of wireless and hardwired, peer-to-peer and school network, integration.
- All computer hardware is interconnected wirelessly with the ability to print to the LAN printer, to communicate each other and access the school’s network and Internet.
- Printing facilities, where available, are provided using a wireless enabled network printer shared on the LAN allowing connected computers obtain direct print access wirelessly from anywhere in the room.
- Computer tracking security feature enabled on all workstation devices along with asset branding to identify property of the NYC Department of Education – Resolution A program devices.

RESO A FUNDING (\$35,000) +

Configuration # 6 - Wireless Classroom Technology Environment (Multiple Classroom Use)

Consist of one of the following set-up:

- (16) Instructional/Advanced wireless laptops (MAC or WINDOWS Platform)
- (1) Advanced wireless instructional laptop (MAC or WINDOWS Platform)
- (1) 16-Unit security/storage cart with printer security
- (1) Wireless network printer
- Peripherals – patch cables, surge protectors, accessory lock box
- The laptop configurations will include the CompuTrace Complete tracking agent and asset branding with the “Property of the NYC Dept. of Education – Reso A” engraved on each unit.
- All new equipment will be configured and tested for printing and Internet access, where available.

Configuration # 7 - Wireless Classroom Technology Environment (Single Classroom Use)

Consist of 2-3 rooms with:

- (5) Instructional/Advanced wireless laptops (MAC or WINDOWS Platform)
- (1) Wireless network printer
- (1) Printer lockdown device
- (1) 5- unit security/storage safe
- Peripherals – patch cables, surge protectors
- The laptop configurations will include the CompuTrace Complete tracking agent and asset branding with the “Property of the NYC Dept. of Education – Reso A” engraved on each unit.
- All new equipment will be configured and tested for printing and Internet access, where available.
- This equipment can be setup and locked down onto a computer table and a printer table or existing table of similar specifications.

¹ Secured cabinets are stored within a school building in classrooms.

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RESO A FUNDING (\$50,000) +

Configuration # 8 - Wireless Classroom Technology Environment (Single Classroom Use)

Consist of 1 room with:

- (20) Instructional/Advanced wireless laptops (MAC or WINDOWS Platform)
- (1) Wireless network printer
- (1) Printer lockdown device
- (1) 20- unit security/storage safe
- Peripherals – patch cables, surge protectors
- The laptop configurations will include the CompuTrace Complete tracking agent and asset branding with the “Property of the NYC Dept. of Education – Reso A” engraved on each unit.
- All new equipment will be configured and tested for printing and Internet access, where available.
- This equipment is setup as a stationary safe within a classroom and is immobile.

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**Base Model Configuration – Wireless Interactive White Board
Presentation Station**



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(a) Wall mounted all-in-one white board unit



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(b) Floor stand white board unit



Copyright 2001–2008 SMART Technologies ULC. All rights reserved.

(c) Airliner wireless slate used by a teacher



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(d) Senteo student interactive response system

The stationary interactive whiteboard presentation station enables integrated computer instruction within the classroom. This model enables teachers and students to annotate and control presentations, document class notes that can be saved electronically and sent via email or stored on the school’s network, and display and interact with an internet session on a large scale for student instruction. An optional wireless slate device is available for wireless communication with the whiteboard by the teacher and students additionally optional student polling devices also available for classroom voting and response interaction.

The following requirements are ensured by the Resolution A project office team:

- Wireless white board presentation stations can be used in a variety of classrooms independent of the limitations of pre-existing electric (wireless data access is required and dedicated electric to support the white board).

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- All computer hardware is interconnected wirelessly with the ability to print to the LAN printer, to communicate each other and access the school’s network and Internet.
- Teacher workstation connects to interactive white board presentation station either hardwired or via wireless Bluetooth connection.
- Projection setup configured and integrated for use with the interactive white board.
- Department of School Facilities (DSF) prerequisites for wall mounted setup are followed.
- Computer tracking security feature enabled on workstation devices along with asset branding to identify property of the NYC Department of Education – Resolution A program devices.

RESO A FUNDING (\$35,000) +

Configuration # 9 - Wireless Interactive White Board Presentation Station

Consist of 6-8 rooms with:

- (1) 64” or larger interactive white board (all-in-one white board/projector units also available)
- (1) Wall mounting device or floor stand for interactive white board
- (1) Projector (not required for all-in-one white board units)
- (1) Projector/workstation security cart (required for all-in-one white board units)
- (1) Instructional/Advanced wireless teacher station laptop (MAC or WINDOWS Platform)
- Interactive white board peripherals – Bluetooth connector, polling system, wireless slate (optional)
- The laptop configurations will include the CompuTrace Complete tracking agent and asset branding with the “Property of the NYC Dept. of Education – Reso A” engraved on each unit.
- All new equipment will be configured and tested for printing and Internet access, where available.