

# Students Providing Tech Support

## What Can Students Do?

- Provide level 1 hardware support
- Be peer mentors in classrooms
- Tech TAs – on call
- Help desk
- Teach teachers about technology
- Provide simple preventative maintenance and software configuration
- Help spread the word about new technology (licensed products such as Atomic Learning, UnitedStreaming, new software, new hardware)
- Provide a direct line of communication about technology benefits to parents

## Benefits of Including Students

- Trust builds responsibility
- 21<sup>st</sup> century skills
- Authentic problem solving
- More tech support at classroom level
- Building a learning community that includes all stakeholders
- Decreases hacking
- Provides highly relevant career and technology education

## Resources

- **Generation YES** – Youth and Educators Succeeding [www.genyes.com](http://www.genyes.com)
- **Generation TECH** – [www.generationtech.net](http://www.generationtech.net)
- **US Department of Education Expert Panel on Educational Technology**  
[www.ed.gov/pubs/edtechprograms/](http://www.ed.gov/pubs/edtechprograms/)
- **Youth Technology Support Collaborative (YTSC)** - on-line *Guide for School Decision Makers* ([www.studenttechsupport.org/](http://www.studenttechsupport.org/))
- **Technology & Learning Magazine**
  - *Shoring Up Your Staff: Timely and Sustained Teacher Support*  
[www.techlearning.com/story/showArticle.jhtml?articleID=52601632](http://www.techlearning.com/story/showArticle.jhtml?articleID=52601632)
  - *Professional Development: 21st Century Models*  
[www.techlearning.com/story/showArticle.jhtml?articleID=13000492](http://www.techlearning.com/story/showArticle.jhtml?articleID=13000492)
  - *Great Expectations, Limited Resources: 12 Tips on Doing More with Less*  
- "Strategy #8 - Relying on Students"  
[www.techlearning.com/db\\_area/archives/TL/2003/06/morewithless.html](http://www.techlearning.com/db_area/archives/TL/2003/06/morewithless.html)

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# Student Tech Support

## Success Factors – School Elements

These characteristics have been identified as factors for success by current practitioners. As you read through this list, think about your school or district and whether or not a student technology leadership program will work in your environment.

**School culture** Will adults in the school accept student assistance? Building support with all stakeholders—teachers, principals, and technical support staff—should be part of the plan. Without their approval and support, students will be fighting to help them.

**Commitment** Students will match the level of commitment that the school shows. If you plan to launch a student program commit time and resources to doing it right: name the group and publicize it; give students t-shirts, jackets, or name badges; provide a classroom or location for the group to meet and store equipment.

**Schedule** Elementary, middle, and high schools each have their own scheduling challenges. What will students have to give up to be part of the program? Will target students have transportation options if the program is outside of school hours? How will students provide support throughout the day without missing classes?

**Sustainability** What happens when this year's students graduate or the faculty advisor leaves? A progressive curriculum gives students options to continue the program and mentor beginning students. By involving a team of faculty and staff during development or joining an external organization, the program exists beyond the classroom of one dedicated teacher.

**Funding the program** Will funding come from the existing budget? How will the district make a commitment to continuing adequate funding to support the program? Is there a plan for fundraising or grant writing? How will these funding sources be sustained?

**Equipment** Students will need access to appropriate resources: tools, software, spare parts, Internet access, email, etc. Ask students for their input throughout the year. They can research new solutions and tools as part of their study.

*From: Decision Maker's Guide to Student Tech Support*  
[www.studenttechsupport.org](http://www.studenttechsupport.org)

# Student Tech Support

## Success Factors – Student Elements

Even more critical to the long-term success of the student technology program is the design of the student experience.

**Leadership opportunities.** Students need increasing challenges and leadership opportunities to motivate them for the long term. Just changing toner cartridges is not enough.

**Trust & responsibility.** These go hand in hand. The adult in charge of the program, whether a teacher, advisor or member of the technical staff must be able to communicate with and care about the students.

**Student-led culture.** Walk the talk of giving students responsibility. It may mean letting go of some aspects, but you will be rewarded by students who step up to the plate and take command. Advanced students need to be the role models and tech gurus, not the teacher.

**Flexible curriculum.** If the only path you offer is vocational, A+ certification, or “job skills”, you will miss out on students who are not on that path. Make sure your program can accommodate anyone from artists to college bound students, and you will be rewarded with a more vibrant, diverse group.

**Open, accepting culture.** Go out of your way to make sure that all students can find their niche, even if they are not super-geeks. Girls especially are sensitive to signals that they are not welcome. Make sure that newcomers can easily find things to do, that supplies and computers are shared equally, and that there is enough time and room for social and collegial sharing within the group.

**Credit.** For long-term sustainability, it is crucial to offer students graduation credit, student leadership or service-learning credit or a path to a paid internship.

**Fairness.** Students need to understand and follow school rules and policies, but will resent arbitrary changes to these policies. Try to set up rules and effective penalties that make sense and give students a say in the administration of their own program. Be sure to mete out punishments and rewards with an even hand.

*From: Generation TECH Program Guide*

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# Student Tech Support

## Security Best Practices with Students

### Work with the System

- Review AUPs and student access rules
- Negotiate expectations and policy
- Negotiate rules for escalation, follow up and documentation
- Protect students from critical data and systems

### Use Security Best Practices

- Differentiated access
- Passwords – change regularly
- Security reviews for ALL staff, teachers, students
- Who is violating security and why? Cracking down on “that’s how everyone does it.”

### Communication

- Openly communicate rules and changes
- New policies should have educational objectives
- Open learning community
- Student-led culture

### Contracts

- Should be “two-way” not just punitive
- Can have multiple levels for advanced students

### Preventing Accidents and Mistakes

- Plan for the worst – mistakes happen.
- Use best practices: virus software, backups, track licenses, inventory
- Practice makes perfect – “what if” scenarios and guided explorations
- Police with policy (not technology)
- Encourage strong student/teacher and peer relationships

### When Bad Things Happen

- One-strike policy, consistently enforced
- Responses should be fair, quick and appropriate

### Structured Freedom

- The price of freedom is documentation, creating tangible evidence of learning and completing tasks
- Reward with increased responsibility and less supervision, not necessarily increased access
- Trust and responsibility

*From: Generation TECH Program Guide*

# Generation TECH Sample Activity: Keeping Computers Healthy



## The Big Idea

This activity is similar to the previous one on maintaining hardware. By reinforcing the research aspect of the class, we reinforce good habits that will help the students when they have to figure things out for themselves.

## Objectives

- Regular maintenance for computer operations systems, software and hard drives
- Using scheduled tasks to keep computers in shape

## Motivation and Presentation

Keeping a computer running well takes physical maintenance like cleaning, but it also takes software upkeep. One must also perform regular maintenance on the operating system, software and the hard drive. These elements get heavy daily use and without regular maintenance they will break down.

Resist the temptation in this activity to just tell the students what they have to do to get these jobs done.

Yes, it takes a little longer to allow the students to research what tasks need to be done and how to do them, but the reward is that they are honing their research skills and not developing a dependency on you as the keeper of all knowledge.

In fact, if this activity is successful, the students may well find new virus software or other maintenance solutions that can be implemented to improve current procedures. Be open to these findings, this is exactly what you want your students to be doing for you!

## Preparation

Explore the terms and their definitions. Discover what your organization is using for the software and hard drive maintenance.

## Resources

### WEBSITE

[Top Ten Anti Spyware Reviews](#)

### WEBSITE

[How Stuff Works - Computer Viruses](#)

### WEBSITE

[How Stuff Works - Spy Ware](#)

### WEBSITE

[How Stuff Works - Disk De-fragmentation](#)

### WEBSITE

[Microsoft Data Back Up Information](#)

## Vocabulary

Backups

Virus Scanning

Spyware Scanning

Hard Drive De-fragmentation

Scheduled Tasks

Patch

Upgrade

## Activity

One hour:

1. Have students research common software maintenance issues and record findings in their blog. (15 Minutes)
  - a. Students should define the terms and concepts they discover
  - b. Have them include the URL of the resource found
2. Results from the research should include:
  - a. Virus scanning and removal
  - b. Spyware scanning and removal
  - c. Regular data backups
  - d. Hard drive de-fragmentation
  - e. Software and operating system updates
3. Share findings with class (10 Minutes)
4. Examine examples online (15 Minutes)
5. Using the Internet and student blogs, examine some of the resources found by students
6. Discuss the information and its relevance to your organization and the students personal computing habits (for example, preventing viruses from being downloaded)
7. Share with the class how these issues are currently being taken care of and discuss if their research supports the current maintenance regime and schedule.
8. Create or modify the schedule for these upkeep tasks based on the new research. (10 Minutes)

## Assessment

Read blog entries for details and ensure class participation in the sharing activity.

## Closure and Lesson Extension

Preventative maintenance will help your computer run more efficiently. Without proper upkeep a computer will slow down and begin to fail, potentially losing data. We don't want this, do we! These steps are not optional. Often someone who has suffered a computer problem will say that they haven't done anything. That is precisely the problem.



# Generation TECH

## Student Tech Support

- **Students learn technology, troubleshooting, and communication skills** as they help the school maintain school technology and infrastructure.
- **State-of-the-art online tools** (blogs, social bookmarking, online collaboration and a help desk ticket tracking system) allow dynamic class management, project tracking and assessment.
- **The school benefits** by having a core of students trained in technology, familiar with the school infrastructure, and immediately available on the school grounds to help fix computers and solve software problems.

### Generation TECH Online Curriculum

- 8 units with 40 activities offer over 70 hours of instruction
- Extensive online resources and activity extensions
- Multi-term activities and independent project support

<b>Unit Activities</b>	
<b>Unit 1: Communication</b> 1. Generation TECH Tools 2. Introduction to Generation TECH 3. Communicating with Others 4. Communicating and Learning 5. Organizing Information 6. Teamwork 7. Listening and Note Taking Skills	<b>Unit 5: Researching Solutions</b> 1. Finding Solutions: The Best Sources 2. Solutions: Going Beyond Vendors 3. Solutions: Contacting the Vendor 4. Peer Inventory of Knowledge
<b>Unit 2: Hardware</b> 1. Understanding Computer Components 2. Component by Component: Going In Depth 3. Boot-up and Information Flow 4. Putting it to Work: Disassembling and Reassembling a Computer 5. Comparing Computer Hardware	<b>Unit 6: Housekeeping</b> 1. Maintaining Hardware 2. Keeping Computers Healthy 3. Maintaining Multiple Computers 4. Inventory
<b>Unit 3: Software</b> 1. Getting Started: Bits and Bytes 2. The Operating System and the OSI Model 3. Installing an Operating System 4. The Operating System: The Ultimate Traffic Cop 5. Application Software 6. How Do I... ? Using Help to Learn More	<b>Unit 7: Projects and Creating Learning Resources</b> 1. Generation TECH Projects 2. Project Planning 3. Producing Effective Tutorials 4. Presenting Information 5. Creating Online Resources Media in Instruction
<b>Unit 4: Problem Solving</b> 1. The Art of the Interview 2. Help Desks and Job Tickets 3. Practicing the Client Interview 4. Fixing Problems for Total Customer Satisfaction 5. Escalation and Follow-up	<b>Unit 8: Portfolios and Closing Activities</b> 1. What is a Student Portfolio? 2. Building a Portfolio 3. Showing the Impact of Student Tech Support

**For more information, call toll free: (888) 941-4369**

# Generation TECH Online Tool Suite

Introductory videos at: [www.generationtech.net](http://www.generationtech.net)

## Individual/Team/Class Blog

- Allows student to document work
- Allows teacher to monitor progress
- Trackback, RSS blog reader support

## Student Dashboard

- Announcement Center - Consolidates blog postings from teacher to whole class
- Community message overview
- Project and task overview

## Teacher Dashboard

- Summarizes student project work and blog entries
- Classroom Blogroll - conveniently allows teachers to read and respond to student blog entries
- Classroom management

## Project Tool

- Organizes work for team or individual student
- Can link tasks, blog entries, bookmarks to projects

## Calendaring

- Project planning tool for student projects
- Shows current projects and tasks in calendar format
- Teacher assessment connection and management
- Tasks link to overall projects

## Social Bookmarks

- Annotate shared links and resources for project or class

## The Leadership Network (theLN)

- Guided discussion of topics related to tech support and student involvement

## Online Help Desk and Ticket Tracking System

- Designed specifically for school use
- Easy to set up, completely online, and requires no special software or hardware



**Class, club,  
or site  
license  
available.**



**Generation YES** is a nationwide publisher of K-12 educational programs specializing in student-centered technology that empower students and improve technology in schools. The Generation TECH model of student tech support is based on the federal Technology Innovation Challenge grant *Generation www.Y*, rated exemplary by the U.S Department of Education's Expert Panel in Educational Technology.

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