

EPA HS Student Tech Team

Summer Boot Camp

Classroom Technology Officers

East Palo Alto High School

Aug 19 - Aug 21

Instructors: Tim Mansfield, Mark L. Miller, Ph.D., Jon Strait
With help from Greg Miller, Adam Vickers, Tom Wilkerson



OVERVIEW

- **Computer Hardware**
- **Computer Networking (From Wires to Protocols)**
- **Windows: Software, Troubleshooting and Preventive Maintenance**
- **Miscellaneous: Peripherals (Printers, Cameras; Zip Drives, Scanners, Microscopes), Web Page Authoring, Programming (time permitting)**

The daily pace and order of topics may vary, depending on the interests, age, and prior experience of the participants. Please label your binder dividers and organize your materials according to these topics, even if some topics are discussed out of order or slop over onto a second day. This overview should go at the very front of your binder.



Independent Projects and Equipment Raffles



If you have a special interest in some aspect of technology, such as web pages or programming, we will try to set aside some time for you to pursue your interest as a project, with instructor coaching. Another idea for an individual project can include bringing in an older, non-working computer from home and see if you can get it going again (if that is OK with your folks).

Independent Projects can be pursued individually or in small groups. However, *please* do not work on *any* computer, whether from home, or a friend, or at school, without permission from the owner or your parents or your teacher. If you do have a unit that is potentially worth repairing, but not extremely valuable, this is a good way to practice some of the concepts and skills we are learning in the workshop. With hard work, patience, and sometimes a little luck, you might be able to revive that older system and make it semi-useful, perhaps for word processing, or games, or maybe as a web server.

Please remember that there is absolutely **no warranty** on any work performed! Students and their families must assume full liability for any subsequent malfunctions of any devices that you bring to class from home. This also applies to any equipment you might win in a raffle. We sometimes have 2 or 3 raffles during our workshops -- sometimes more, sometimes less -- it depends on what equipment happens to become available to us. No promises, but if there are enough computers to go around, we **might** actually be able to give away a computer to each participant, using the raffle system only to see who gets to pick first! (These are older units.) You may be expected to earn any such equipment, such as through contributing tech support services to your school. As your teacher for details.

Rules and Expectations



Please Help Create an Atmosphere Conducive to Learning

1. Learn. 2. Help Others Learn 3. Have Fun -- in that order.
If You Already Know Something, Please Help Others Learn it

Attend Daily: Arrive On Time, Stay Until the End, Depart Promptly
This is required to graduate, get an ID card, and keep your toolkit.
Please make prior arrangements with instructor for exceptions.

To participate in the school-year Tech Team/CTO program (starting in September),
you must always bring your ID card. Your binder and/or toolkit may also be required,
depending on the activity. Never carry tools on campus without permission.

It is fine to bring a Snack for the Break (Must be Eaten Outside)
No Eating, Drinking, Chewing, or Using Magnets Near Computers

No Smoking, No Drugs (Very Serious, Ends Participation)
Needless to say, no “weapons” of any kind. Pocket Knives are *not* OK.

When Instructor asks for your **Attention**:

Stop Talking

Take Your Hands off the Computers

Look Up--**Immediately**

This is not only a matter of respect but also a matter of safety!

Computers and Ethics

No Inappropriate Language, Content, Email or Web Sites

Never "Pirate" Software (Pirating = Stealing)

Give Credit for Work of Others

Using the Ideas/Words/Pictures of other people, without
acknowledging them, is called, *Plagiarism*)

Respect Privacy and Work of Others

Respect Property of School and of Other People

If it isn't OK at school or at home, it is not OK in Cyberspace!

If your parents wouldn't think it is appropriate, it's not appropriate!

Safety First

Electrical Devices

Power Disconnected

There are exceptions, but adult supervision is *essential*.

Never Open CRT (Monitor), even if disconnected

Always Have Adult Permission Before Opening Hardware

Wear Shoes/Sneakers; Never Stand in Water

Avoid Static Electricity Damage to Computer Parts:

Grasp by Edges only

Remember to Use Anti-Static Procedures

Tools

No horseplay with tools!

Check-in/Check-out when brought to school in the Fall

Even **Screwdrivers** can be considered weapons, so always get **permission before using your tools!**

Most tool use requires adult supervision.

ID Card also required when school is in session.

Some tools (e.g. vacuums) are *noisy*: Be Considerate

Materials

"Canned Air" requires adult check-out

Never Inhale -- It Can Cause Brain Damage

Isopropyl Alcohol requires adult check-out

Never Drink -- it is not that kind -- it is **POISON!**

Typical Consequences of Inappropriate Behavior

First Offense: Verbal Warning, Name Written Down

Second Offense: Parent/Guardian Called, Out for Day, Corner Cut Off ID Card

Third Offense: Parent/Guardian Called, Out of Program, ID Card Lost

Members of the Tech Team (also known as CTOs) should be models for their school, both in terms of *skillful* technology use and in terms of *appropriate* technology use.

Materials and Equipment



***TASK:** Be ready to identify each tool and explain its purpose.*

Tool Kits (11-12 pieces, zipper case)

Belt case for additional tools or small parts, as desired

Binder

Zipper Pencil Case (for Inside Binder):

Penlight or Small Flashlight

Anti-Static Wrist Strap

Floppy Diskette Blank Labels

Yellow Stickies or Other Labels (to identify computers, parts)

Paper Clips

Cable Ties

Cotton Swabs

Some items are common household items you may replenish.

If you want to add **tools** of your own, please ask permission

Long-nose pliers would be useful and OK

Swiss Army Knife useful, but is **NOT** OK at school

Likewise for Leatherman: very useful, but NOT OK.

Other tools may be used only if checked out and supervised

Floppy Diskette Page and several blank floppies

One to make Emergency Disk for Windows

Three Spares, for backups etc.

Blank Filler Paper:

Take Notes in Class

To Keep a Journal/Log of your Work on any Computer

Binder Dividers

Trouble Ticket Forms

For some workshops, there will be a CDROM (e.g., Windows Goodies)

HANDOUTS

- Overview
- Acknowledgements
- About the Instructor(s)
- Computer Hardware
- Computer Networking (From Wires to Protocols)
- Windows: Software, Troubleshooting and Preventive Maintenance
- Miscellaneous Topics: Peripheral Devices (Printers, Cameras, Zip Drives,
 - Scanners, USB Microscopes); Web Pages; Programming