

Teacher Guide

The Triumph of the Nerds

For Grades 7-College

Teacher's Guide by: Bill Roberts



Published and Distributed by...
Ambrose Video Publishing
145 West 45th St. Suite 1115
New York NY 10036
1-800-526-4663
24-Hour Fax 212-768-9282
<http://www.ambrosevideo.com>

This video is the exclusive property of the copyright holder.
Copying, transmitting, or reproducing in any form, or
by any means, without prior written permission from the
copyright holder is prohibited (Title 17, U.S. Code Sections 501 and 506).
(c) MMIV Ambrose Video Publishing, Inc.

Table of Contents

Table of Contents and Rights	2
Instructional Notes	2
Introduction and Summary of the Series	2 - 3

Program One: Impressing Their Friends. 3 - 4

Program Two: Riding the Bear 4 - 6

Program Three: Great Artists Steal 6 - 7

The DVD version is English Subtitled.

The purchase of this video program entitles the user to the right to reproduce or duplicate, in whole or in part, this teacher's guide, for the purpose of teaching in conjunction with this video, THE TRIUMPH OF THE NERDS. This right is restricted only for use with this video program. Any reproduction or duplication in whole or in part of this guide and the handouts for any purpose other than for use with this video program is prohibited.

CLASSROOM/LIBRARY CLEARANCE NOTICE

- This program is for instructional use. The cost of each program includes public performance rights as long as no admission charge is made. Public performance rights are defined as viewing of a video in the course of face-to face teaching activities in a classroom, library, or similar setting devoted to instruction.
- *Closed Circuit Rights* are included as a part of the public performance rights as long as closed-circuit transmission is restricted to a single campus. For multiple locations, call your Ambrose representative.
- *Television/Cable/Satellite Rights* are available. Call your Ambrose representative for details.
- *Duplication Rights* are available if requested in large quantities. Call your Ambrose representative for details.
- *Quantity Discounts* are available for large purchases. Call your Ambrose representative for information and pricing. Discounts, and some special services, are not applicable outside the United States.

Your suggestions and recommendations are welcome. Call Ambrose Video Publishing at 1-800-526-4663 between the hours of 9-5 EST, Monday through Friday or visit the website at www.ambrosevideo.com.

INSTRUCTIONAL NOTES

It is suggested that you preview the program and read the related information. By doing so, you will become familiar with the materials and be better prepared to adapt the program to the needs of your class. You will probably find it best to follow the programs in the order in which they are presented in this Teacher's Guide, but this is not necessary. It is also suggested that the program presentation take place before the entire class and under your direction. As you review the instructional program outlined in the Teacher's Guide, you may find it necessary to make some changes, deletions, or additions to fit the specific needs of your students.

The Triumph of the Nerds

It happened more or less by accident; the people who made it happened were amateurs; and for the most part they still are. From his own Silicon Valley garage, author Bob Cringely puts PC big shots and nerds on the spot, and tells their incredible true stories. Like the industry itself, the series is informative, funny and brash.

(Each episode is 60 minutes long)

1. IMPRESSING THEIR FRIENDS

They did it because they were geniuses; they did it because they were addicted to the mental challenge. But mostly they just invented personal computing to impress their friends. From the Homebrew Computer Club and the first PC—the Altair 8800—they went from being hobbyists to holding court to IBM.

2. RIDING THE BEAR

The IBM PC hits the business world and the suits meet the nerds. Then clones invade the market. A tiny software company called Microsoft tries to cooperate with IBM, and then competes with them.

3. GREAT ARTISTS STEAL

Xerox PARC—a user-friendly technology—is adapted by Steve Jobs for the Macintosh. Then Jobs is fired by the man he hired. Now Windows 95 brings the Graphical User Interface to make pc's friendlier and in the process makes Bill Gates the richest man in the world.

PROGRAM 1: IMPRESSING THEIR FRIENDS

Teachers are encouraged to preview the film before showing it in class

Bob Cringley, Silicon Valley and some spectacularly successful nerds; Intel, the Altair 8800 and the Homebrew Computer Club. Enter Paul Allen and Bill Gates. The West Coast Computer Faire and hippie culture collide with nerds and hobbyists. Steve Wozniak spawns Apple II. Steve Jobs, at 25 worth \$100 million. The imminent arrival of IBM Computer nerds impressing their friends.

Episode Participants:

Bill Gates, chairman of Microsoft, richest man in the world

Steve Jobs, hippie co-founder of Apple Computer, CEO of NeXT, and the man who wanted to change the world

Steve Wozniak, Co-founder of Apple Computer, engineering genius, practical joker

Ed Roberts, true inventor of the first long forgotten personal computer, the Altair 8800, now a doctor.

Edwin Chin, ten year old Silicon Valley nerd.

Douglas Adams, author of "Hitchhiker's Guide to the Galaxy"

Christine Comaford, software consultant, self-confessed nerd

Gordon Moore, chairman of Intel, world's largest chip maker

Eddie Currie, engineer who helped design the Altair

David Bunnell, MITS employee and founder of "PC World" and "MacWorld" magazines

Lee Felsenstein, founder member Homebrew Computer Club

Roger Melen, Homebrew member and PC designer

Harry Garland, Homebrew member and PC designer

Jim Warren, Founder and organizer of the West Coast Computer Faire
Chris Espinosa, 14-year-old employee of Apple Computer, still there at 32
Arthur Rock, founding father of venture capital who was Apple Computer's first investor
Dan Bricklin, inventor of the spreadsheet Visicalc
Bob Frankston, software designer of Visicalc

Program Content:

- In 20 years the computer industry grew from toys for hobbyists to the 3rd largest industry in the world.
- It was begun by young middle-class white suburbanites.
- Bob Cringley calls himself a "PC gossip columnist".
- A nerd is one who "uses a computer to use a computer".
- Pioneers combined hobby with business and changed the workplace from 9 to 5 to 80 hours anytime in any dress.
- "If you can quantify it, computers can handle it." All process numbers using a binary code for instructions and data.
- Huge ENEAC of World War II, was run by vacuum tubes.
- Grace Hopper invented the first "language", COBAL.
- Breakthrough was the silicon chip replacing the transistor.
- Intel invented the microprocessor which now powers 85% of all computers in the world.
- Ed Roberts used it to invent Altair, a kit which did nothing but was a hit with nerd clubs, like Homebrew.
- Bill Gates and Paul Allen invented the first program and founded Microsoft in Albuquerque.
- Terminals were attached for games and word processing.
- 1978 Computer Faire popularized and spread computing by bringing together the creative young democratic hackers.
- The two Steves created the first real "packaged" computer, Apple II, in a garage in 1978. "Woz" was the genius at miniaturizing and Jobs got the financial backing. Two years later they were multimillionaires.
- The needed "killer application" was supplied by Visicalc, a spreadsheet, which married the computer to the money world.
- In 5 years pc's had become a \$100 billion industry, getting the attention of the 800 pound gorilla, "Big Blue".

PROGRAM 2: RIDING THE BEAR

Teachers are encouraged to preview the film before showing it in class

IBM's decision-"buy not build" PC technology. The tiny software company named Microsoft. Culture shock-the suits meet the nerds. IBM PC hits the American business world. Clones invade the market, and Bill Gates sells to every clone maker. Microsoft and IBM cooperate, compete, and split. IBM launches OS/2 and Microsoft comes up with Windows. Bill Gates wins again.

Episode Participants:

Bill Gates, chairman of Microsoft, richest man in the world

Steve Jobs, hippie co-founder of Apple Computer, CEO of NeXT, and the man who wanted to change the world

Steve Wozniak, Co-founder of Apple Computer, engineering genius, practical joker

Ed Roberts, true inventor of the first long forgotten personal computer, the Altair 8800, now a doctor

Sam Albert, lifelong IBM employee and computer consultant

Rich Seidner, 25-year IBM software veteran, now escaped to Silicon Valley

Bill Lowe, head of IBM PC development team

Jack Sarns, member of the IBM PC development team

Gordon Eubanks, CEO and chairman of Symantec, Silicon Valley software company

Vern Raburn, President of the Paul Allen Group

Christine Comaford, software consultant, self-confessed nerd

Tim Patterson, software and operating system designer

Sparky Sparks, head of marketing for the IBM PC

Rod Canion, co-founder of Compaq

Jean Richardson, the most senior woman to work for both Apple and Microsoft

Larry Ellison, the most outspoken billionaire in Silicon Valley

Claude Stern, Silicon Valley lawyer

Jim Cannavino, former head of IBM PC division

Charles Simonyi, software wizard at Microsoft

Esther Dyson, PC insiders' industry newsletter guru

Program Content:

- By 1980 IBM was the leader in computers, but in main frames for business. It was a corporate "country" Switzerlandlike, with dress codes, employee loyalty and company songs.
- The emerging PC market got its attention and it wanted in.
- Bill Lowe and his development team created the IBM PC in just a year by adopting an "open architecture", a heretofore heretical concept. But needing software it went to Bill Gates.
- Microsoft had the language, Basic, but no operating system. IBM went to Digital Research who blew its opportunity.
- Microsoft's Paul Allen found the O/S at Seattle Computing, much of which had been swiped from DR. The opportunistic Gates bought it for \$50,000, developed MS DOS, and sold millions of them at \$50 each.
- So IBM, with Intel's processor and Microsoft's software, introduced its PC in August 1981. Its trusted name and its "killer application", Lotus 123, exceeded all sales expectations.
- But IBM overlooked the opportunity for the creation of clones. Using "reverse engineering" Compaq copied the IBM ROM chip; soon others followed and all were cheaper. By not keeping exclusivity IBM threw away a \$100 billion.

- Gates still "riding the IBM bear" sold MS DOS to all. IBM, to undermine the clones and Gates, developed OS/2; Gates developed Windows and pulled out of their partnership.
- IBM's arrogance had dropped them back to mainframes.
- Gates' paranoia had fostered a super aggressive Microsoft.
- Then during the 1984 Super Bowl, Apple unveiled its famous TV commercial announcing the product which would destroy "big brother Blue". They picked the wrong target.

PROGRAM 3: GREAT ARTISTS STEAL

Teachers are encouraged to preview the film before showing it in class

Windows 95—biggest global product launch ever for a 20-year-old concept. Satellite links, rock 'n' roll and Jay Leno introducing Bill Gates, the richest man in the world. Xerox PARC—the user friendly technology—adopted by Steve Jobs for Macintosh. Jobs fired by the man he hired. Making PC's more friendly with Graphical User interface. Billionaire and millionaire nerds triumphant.

Episode Participants:

Bill Gates, chairman of Microsoft, richest man in the world

Steve Jobs, hippie co-founder of Apple Computer, CEO of NeXT, and the man who wanted to change the world

Steve Wozniak, Co-founder of Apple Computer, engineering genius, practical joker

Ed Roberts, true inventor of the first long forgotten personal computer, the Altair 8800, now a doctor

Bob Taylor, head of Xerox, Palo Alto research center

Larry Tesler, Chief Scientist, Apple Computer, formerly of Xerox PARC

John Warnock, Chairman of Adobe Systems, formerly of Xerox PARC

Adele Goldberg, Chairman of ParcPlace Systems, formerly of Xerox PARC

Bob Metcalfe, President of 3COM, formerly of Xerox PARC

Larry Ellison, the most outspoken billionaire in Silicon Valley

Claude Stern, Silicon Valley lawyer

Bill Atkinson, design team, Apple Macintosh

Andy Hertzfeld, design team, Apple Macintosh

Jeff Raikes, ex-Apple, now Microsoft

Dana Muise, computer games and graphic designer

Chris Espinosa, 14-year-old employee of Apple—still there aged 32

"Good artists copy; great artists steal."—Pablo Picasso

Program Content:

- In 1971 Xerox began the Palo Alto Research Center hoping to continue their dominance in the office of the future. In two years they had developed the first user-friendly computer. The GUI contained a mouse, ether net and a laser printer. They could not sell the concept to their New York bosses and when they showed it to Jobs they literally gave away the store.

- Lisa incorporated Xerox's GUI but couldn't use IBM software and was in trouble. The Apple board fired Jobs from Lisa.
- Jobs developed Macintosh, hired young hotshots, staged a big introduction, and signed Bill Gates to write software.
- IBM had no GUI but had lots of software and was cheaper.
- The Mac was launched, a \$15 million campaign in January 1984, with the sensational commercial during the Super Bowl.
- Sales lagged at first and Sculley fired Jobs. But Gates came up with software and Adobe the laser printer driver. WYSIWYG was the "killer" application and sales soared.
- Jobs always saw IBM as the enemy. By 1987 Apple passed them, but did not look back to see who was coming up fast.
- Bill Gates introduced Windows 3, a GUI stuck to MS DOS, in 1990. It was now as easy as the Mac. Apple sued Gates for stealing the GUI but lost. Gates wins again.
- Gates launched Windows 95, the biggest promotion ever, wanting Microsoft software on every computer in the world.
- Then came the Internet and Gates, seeing the demise of the PC, joined NBC and Stephen Spielberg, and Larry Ellison, seeing the Net replacing all, came up with Oracle. Quo Vadis?

WARNING: For School and Library use only. Any unauthorized copying, hiring or public performance of the video cassette/DVD is expressly prohibited and is illegal under federal copyright law.

<p>Ambrose Video Publishing, Inc., 145 W. 45th Street, Suite 1115, New York, NY 10036 Phone: 1-800-526-4663 ♦ www.ambrosevideo.com</p>
