

Technology: The Next Step

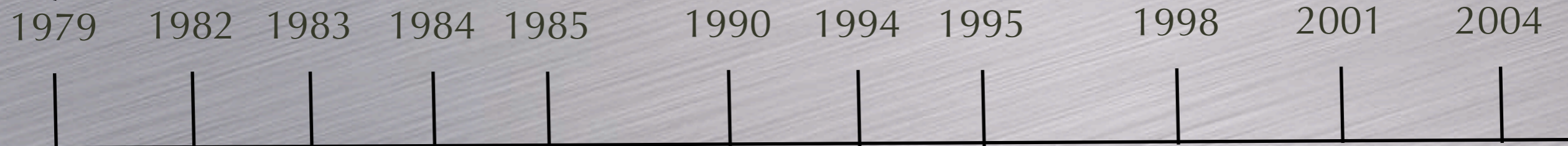


History of Computing in Fullerton

Four Apple II Plus computers purchased for Pacific Drive



- Commodore PET
- Radio Shack TRS-80
- Apple II Plus





Kids Can't Wait

1983

Apple Computer donates a computer to every school in the state of California.

Apple Learning Interchange

Igniting conversation, imagination, and improvement in education.



[Teaching & Learning](#)
[Digital Learning Events](#)
[Leadership](#)
[Technology Showcases](#)
[Affiliates](#)

[Support](#) | [Advanced Search](#) | [Site Map](#)

Search



Core Democratic Values LIVE

This unit is a cross-grade level activity between senior government and fifth grade social studies students. Teams create desktop movies depicting the concept of each one of the core democratic values and the relationship of that value to their own lives.



Celebrating 100 Years of Flight

Join us on a trip through time as we continue the celebration of the first hundred years of flight with a visit to the Smithsonian National Air and Space Museum's newest facility, the Steven F. Udvar-Hazy Center.



Flight of the Painted Ladies

Understanding the life cycle of animals is an important part of science. In this project, a class from Webb City, Missouri witnesses and documents the 14-day life cycle of the painted lady butterfly.

Welcome Educators.
Digital teaching and learning is only a click away. Take one of our interactive tours below to discover content that comes to life!

Site Overview Tour

- Discovery Tours**
- ▀ [Elementary](#)
 - ▀ [Middle School](#)
 - ▀ [High School](#)
 - ▀ [Higher Education](#)

Stay in Touch!

iCal users may subscribe to the [ALI Events Calendar](#) to monitor event schedules automatically. Sign up for [Education eNews](#) to receive monthly Apple and ALI updates.



Download this brochure to learn more about the Apple Learning Interchange and share it with your colleagues. Requires Adobe [Acrobat Reader](#).

Events

Premiering This Week



The Search for Habitable Planets Around Other Stars
Mon, June 7 at 8:00 p.m. EDT

Do planets similar to Earth exist? This four-part series will explore the technology astronomers are using to hunt for other planets like ours and the prospects for sustaining life there.



Live with Lewis from Glasgow, MO
Thu, June 10 at 12:30 p.m. EDT

Located at a sharp bend of the Missouri River the town of Glasgow early in its history was a busy steamboat port. Today, it is the latest stop for the

Teaching & Learning

- ▀ [Great Scientific Debates: Using iMovie to Teach History and the Nature of Scientific Inquiry](#)
- ▀ [The National Math Trail](#)
- ▀ [Pop Portraits](#)
- ▀ [Preserving Memories: Creating iPhoto Books](#)
- ▀ [HOTT Map Skills](#)
- ▀ [More ...](#)

Technology Showcases

- ▀ [NoteTaker: The Essential Tool for Teaching and Learning](#)
- ▀ [Web Design for the Real World: The Miami-Dade Public Schools Web Academy](#)
- ▀ [Videography for Educators](#)
- ▀ [Technology Leadership](#)

Lesson Ideas

- ▀ [Electronic Portfolios for Assessment](#)
- ▀ [Maui's Coral Reefs-Echinoderms](#)
- ▀ [iPoetry: Modern Interpretation of Classic Poetry](#)
- ▀ [Flight of the Painted Ladies](#)
- ▀ [Rights and Responsibilities: Grass Born to Be Stepped On](#)
- ▀ [More ...](#)

Leadership

- ▀ [9th Annual Multicultural Conference](#)
- ▀ [If You Give a Kid an iBook](#)
- ▀ [NCLB - Using Data for Results](#)
- ▀ [A Framework for Understanding Poverty](#)
- ▀ [More ...](#)



Search

Advanced Search

Use any combination of the form fields below to search our site.

Text:

Text Search Mode: Full Text | Keywords Only

Subject:

Level:

Search within:

Search Hints

This search form allows you to search through the Learning Interchange's growing collection of great content. You may use any of the search criteria to the right in any combination. If you receive a "no search results" message, you may want to try a more general query.

Text Searching

Multiple words can be entered separated by spaces. The default search mode is "Full Text" which will search the full text of all published exhibits for your search terms. You may switch the search mode to "Keywords Only" to search only against the keyword information entered by the author. The system will return the most relevant documents first.

Additional Resources



[The Gateway to Educational Materials \(GEM\)](#) is the key to one-stop, any-stop access to thousands

of high quality lesson plans, curriculum units and other education resources on the Internet! GEM is a project of the U.S. Department of Education. The Apple Learning Interchange is a member of the GEM Consortium.



Search Results

Results 1-7 of 7

Page 1 of 1

Where the River Meets the Sea

This electronic field trip explores Chesapeake Bay, the nation's largest and most productive estuary. Join Smithsonian scientists and educators as they investigate the physical and biological environment of the Bay ecosystem, focusing specifically on the Rhode River, a sub-estuary of the bay south of Annapolis, MD.

Type: Virtual Field Trip
Grade Level: Primary (K-3)
Middle School (6-8)
Intermediate (4-6)
Subject: Science – Earth Science
Science – Life Science
Author: Insite Distance Learning

The Case of the Phenomenal Weather

Join the tree house detectives as they plan a trip to Florida and encounter problems trying to predict the weather. In this case, the tree house detectives will learn about violent storms such as hurricanes and tornadoes, weather fronts, global wind patterns, and climates. While solving the case, they will discover that predicting the weather is not predictable at all!

Type: Digital Documentary
Grade Level: Intermediate (4-6)
Subject: Science – Earth Science
Science – Physical Science
Author: NASA Distance

The NASA SCI Files™

The NASA SCI Files™ series is a distance learning initiative designed to integrate and enhance the teaching of mathematics, science, and technology in grades 3-5. Each episode includes hands-on classroom and home activities, virtual field trips, subject-matter experts, and Dr. "D," the tree house detectives' next-door neighbor and mentor. The tree house detectives form an ethnically diverse cast of inquisitive school children who use Problem-Based Learning strategies and scientific inquiry to investigate a variety of issues and problems.

Type: Event Series
Grade Level: Intermediate (4-6)
Subject: Science – General Topics
Author: NASA Distance Learning

The Case of the Wacky Water Cycle

The tree house detectives are eager to earn money to help Kathryn sponsor her soccer team on a white water rafting trip. However, their efforts soon dry up as KSNM announces that the water level in the reservoir has dropped drastically and water restrictions are in force. The tree house detectives are disappointed but understand the importance of following the restrictions. However, they are a little confused because they have been unaware of any drought like conditions that could have caused the drop in the reservoir.

Type: Digital Documentary
Grade Level: Intermediate (4-6)
Subject: Science – Earth Science
Author: NASA Distance Learning

Along the Birdhouse Trail

Students of Nassau-Spackenkill School, NY, set up and maintain birdhouses on the school grounds in an effort to witness and

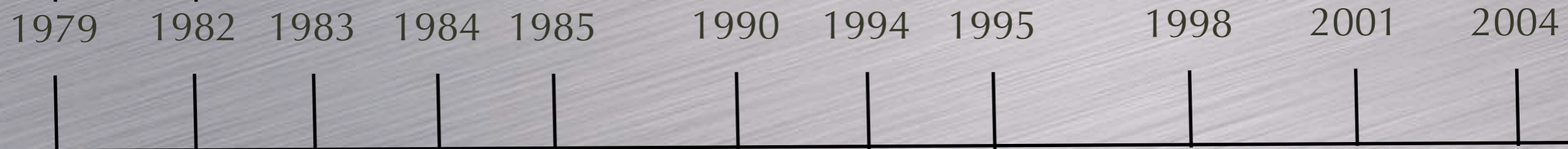
Type: Lesson Idea
Grade Level: Intermediate (4-6)

History of Computing in Fullerton

15 computers purchased from 1979-82



Fern Drive, Pacific Drive, Raymond,
Sunset Lane, Woodcrest

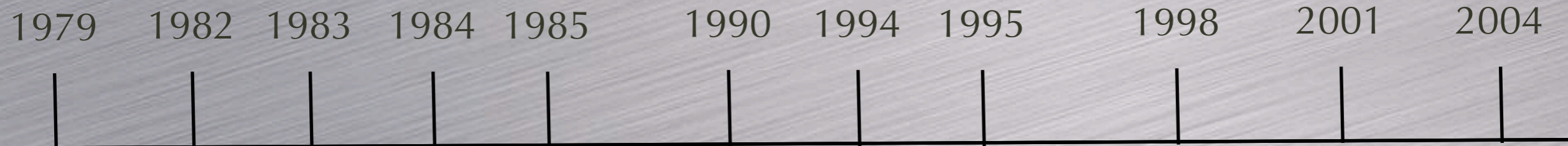


History of Computing in Fullerton

Districtwide bid for 73 Apple II Plus computers



- 1 to 150 in elementary
- 10 station lab in junior high
- Modem
- Printer

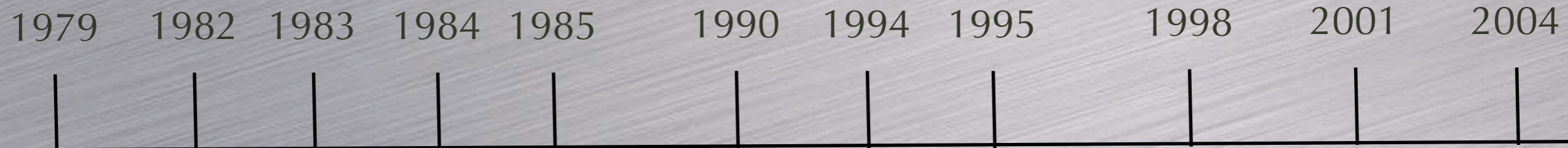


History of Computing in Fullerton

District establishes Apple service center



- Full warranty and post-warranty service
- Currently servicing over 3,000 computers
- Staff has doubled to two



History of Computing in Fullerton

North Orange County Educational Computing Consortium Founded



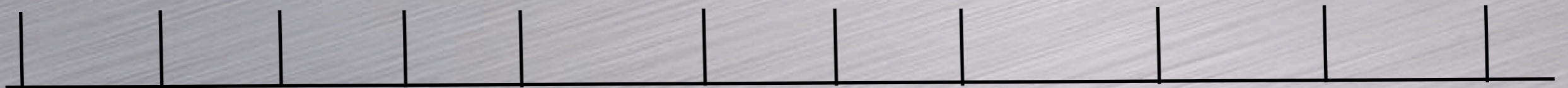
Yorba Linda School District



Buena Park School District



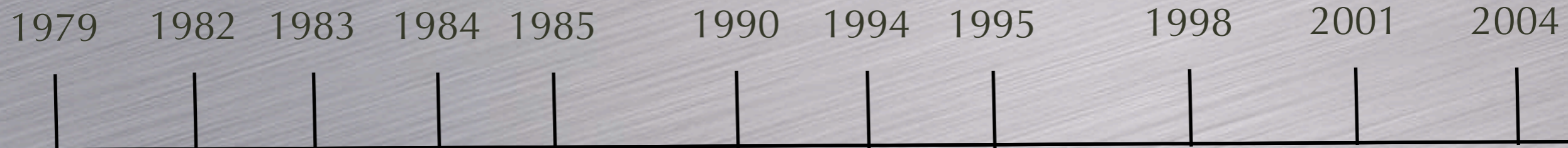
1979 1982 1983 1984 1985 1990 1994 1995 1998 2001 2004



History of Computing in Fullerton

FSD Electronic Bulletin Board System Goes Online

- Dial-up
- Single-user
- Second BBS for educational use
- Ran on an Apple II Plus
- Part of FrEdMail system
- Newswire simulation



FULLERTON SCHOOL DISTRICT
STUDENT NEWS

Circulation 7,500

Fullerton, California

June 1988

Kidwire

by Ted Kim
Grade 5, Sunset Lane School

If you are wondering how the newspaper is made, this is the article you should read. The way we get all our articles together is by Kidwire. Kidwire is a computer system on which we can get articles from across the country. People write articles then send them by computer, and the best stories are picked to be put in the newspaper. The stories you read come from many other places. If it weren't for Kidwire, you wouldn't be reading this fabulous newspaper.

Spirit Awards

Written by Jonathan Calvillo
Grade 3, Pacific Drive School

At Pacific Drive we get Spirit Awards. Spirit Awards are when we have a clean table and the Principal gives us a little blue paper. That is a Spirit Award. We can also get it if we have a clean room at the end of the day. Every Friday in the morning at assembly the Principal announces the winners. If you win you get to go to lunch 10 minutes early for a week.



The Parent Page

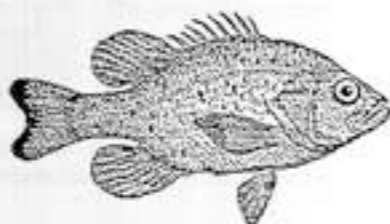
Parents, be sure to read the last page of this newspaper for articles intended especially for you!

Woodcrest Students Go Fishing!

Written by Shawn West
Grade 5, Woodcrest School

On February 5, the Special Education students from Woodcrest went fishing at the Santa Ana River Lakes. Volunteers helped the students. They didn't catch many fish.

An added attraction at the lakes was a fire truck and a helicopter. The students watched the helicopter fly and they got to try on fire equipment.



The Special Education students and teachers would like to thank the Easter Seals Society for coordinating the trip. Also, thanks to the Buena Park Elks for supplying the food for lunch and the Fullerton Elks for paying for buses.

The Trip

Written by Christy Verneuil
Grade 8, Parks Jr. High School

Dark shadows lingered and cold nipped at my fingers as I climbed into the heated car. It was 6:30 A.M. and I was on my way to my first garage sale to raise money for the eighth grade trip to Washington D.C. I had spent the previous night carrying an endless number of boxes to the car. After trying to squeeze just one more broken toy here and torn sweater there, I finally retired to bed to catch a wink of sleep.

Finally arriving at Orangethorpe School, I pictured the dreaded chore of unpacking in my mind. It's for a good cause, I kept telling myself. After we were unpacked, potential customers could be seen wandering through the parking lot. Smells of hot coffee and Egg McMuffins from the McDonald's across the street filled the air.

Dreaming ahead, I imagined a bus load of students driving through the quiet town of Williamsburg. Crisp spring air filters in through the window. When my sister came back from her D.C. trip, she was full of excitement and fascinating stories from the trip. I hope our D.C. trip this year is as enjoyable as her's was.

My Tropical Island

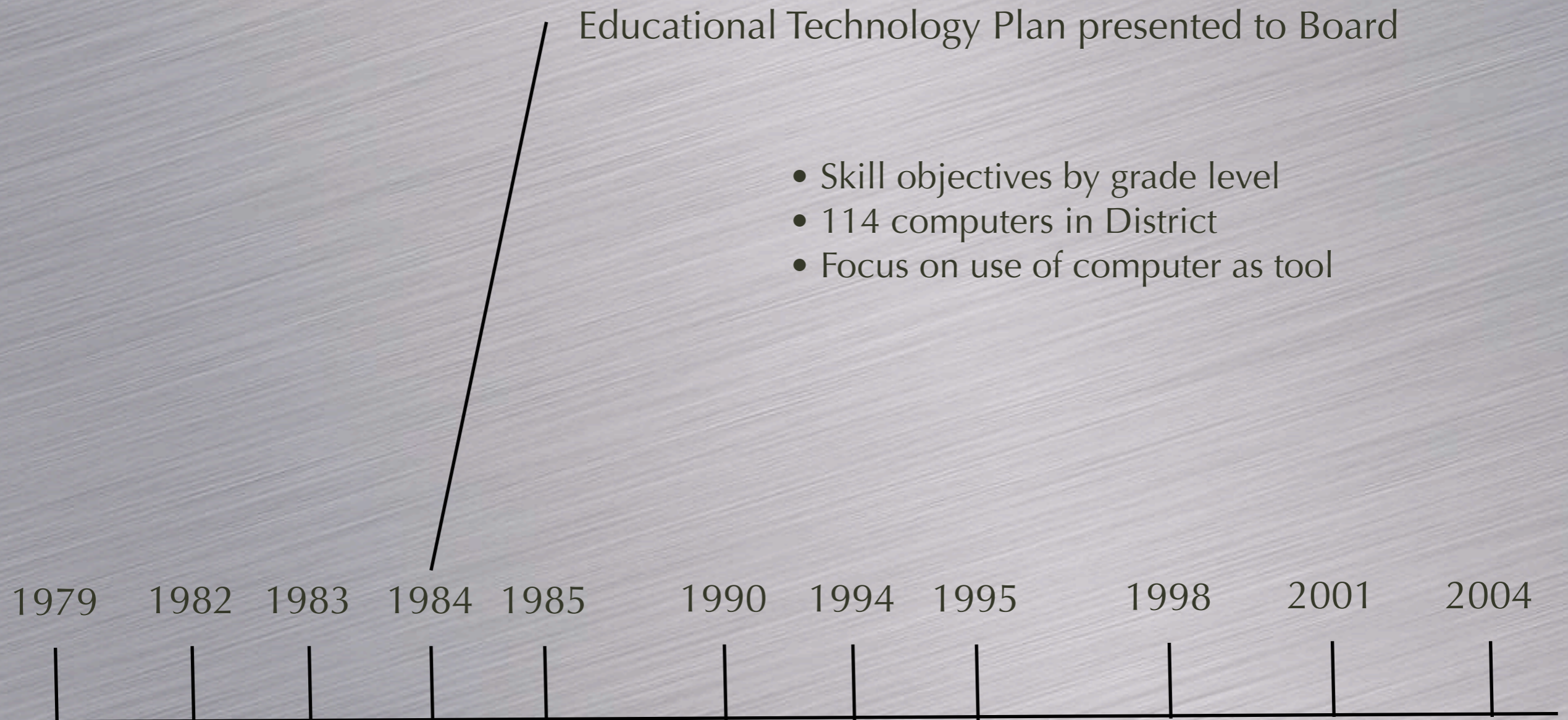
By Rachel Sady
Grade 5, Commonwealth School

If I had a tropical island I would lie all day in the cool white sand. The wind would blow silently through the palm trees and cool the day from the sun. There would also be coconuts. The coconuts that would be on my island, I would pick and drink their milk. The milk would be cool and creamy for me to drink. The tropical flowers would have a wonderful smell and would come in all colors. In the evenings I would walk the beaches, looking out to the sky with purple and bright pink streaks of colors.

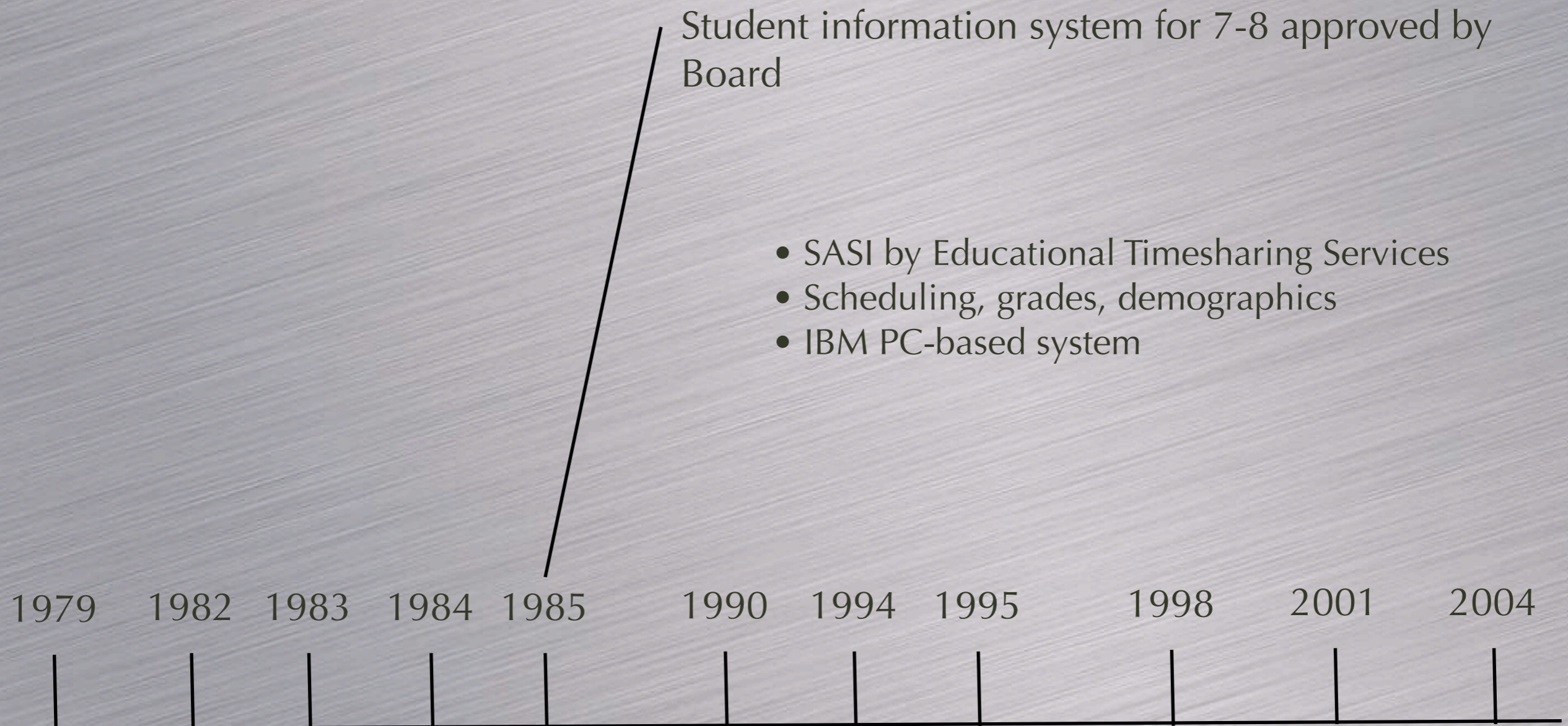
I would like to make friends with the animals on my island. All the beautiful birds, tigers, lions, and zebras would be friendly. The birds flying through the trees would come and land on my hand when I call. I would name each animal a different, and special name. The tigers and the lions would playfully wrestle with me. I would pretend the zebras were white stallions galloping through the sand. It would be so much fun! Oh, I wish I could live in such paradise.



History of Computing in Fullerton



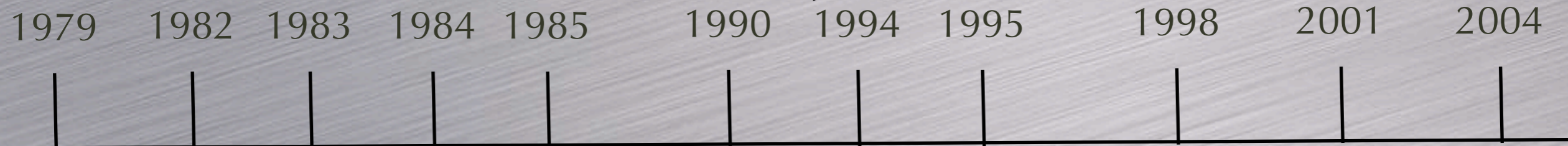
History of Computing in Fullerton



History of Computing in Fullerton

Transition from Apple II to Macintosh accelerates
1987-93

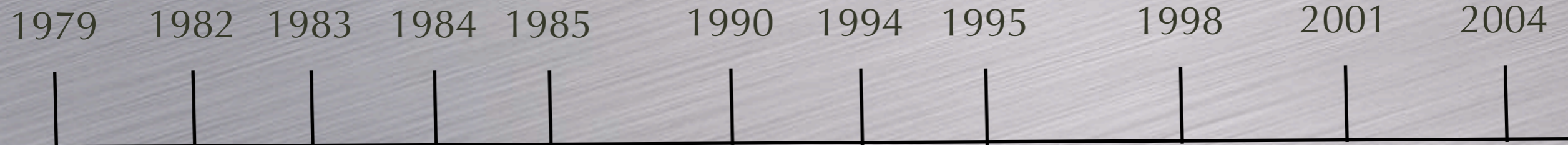
- Ile card for Mac LC provides “bridge”
- Apple IIe discontinued Nov. 1993



History of Computing in Fullerton

Technology bid approved by Board

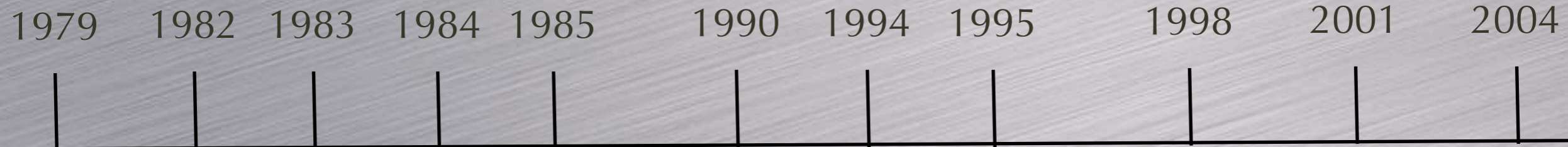
- Districtwide student information system K-6
- Mac School Student Information System
- Three Macintoshes per school office
- QuickMail email system — Schools dialed-in



History of Computing in Fullerton

Laguna Road network installed

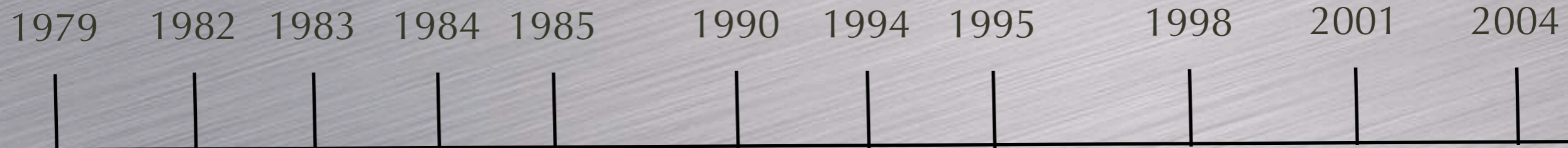
- Academic model school technology grant
- First school with classrooms networked



History of Computing in Fullerton

Districtwide Area Network Built

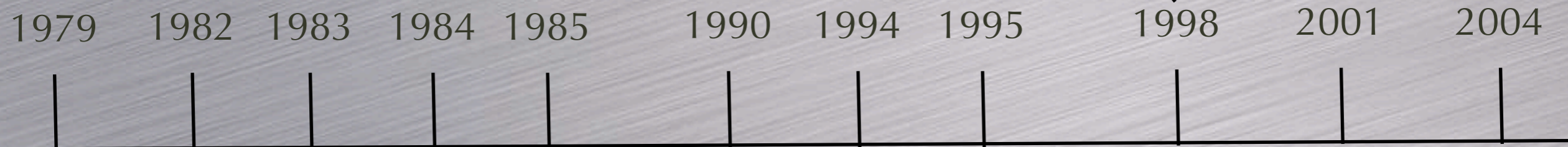
- Pacific Bell Education First Initiative
- Built using ISDN service
- All school offices connected to WAN
- Internet access comes to all schools
- Fullerton web site goes online



History of Computing in Fullerton

School network wiring installed

- Schools wired as funds allowed
- NetDay Volunteers used in March and November 1996
- Provided cable, support materials



NetDays 1996

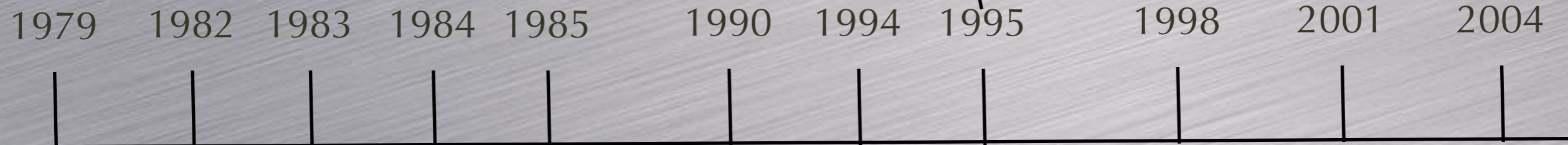


Acacia, Fern Drive, Nicolas and Parks NetDays — 1996

History of Computing in Fullerton

Mac School Installed in Junior Highs

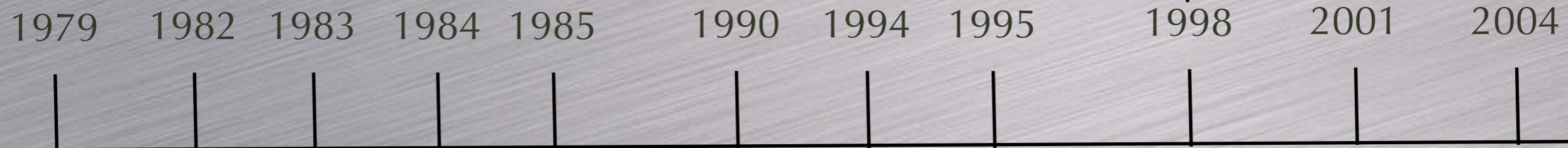
- All schools on same SIS



History of Computing in Fullerton

- Wired all classrooms in eligible schools
- Nicolas, Orangethorpe, Raymond
- Robust, reliable networks
- Subsequent Erate cycles included Commonwealth, Ladera Vista, Pacific Drive, Richman, Rolling Hills, Valencia Park, Woodcrest

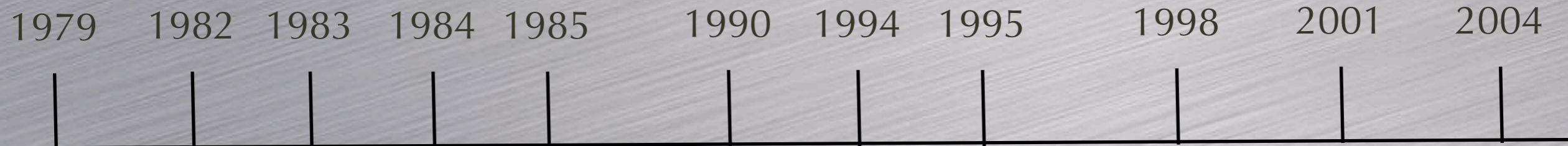
Erate Cycle 1



History of Computing in Fullerton

All school classrooms connected to network

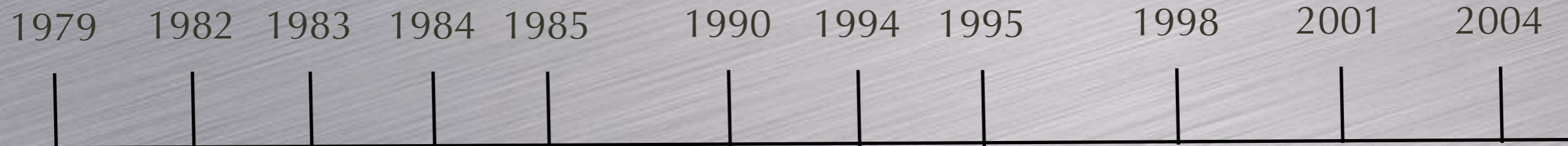
- Combination of block grant, Erate funds
- First time that all classrooms and offices would be connected to the WAN
- Upgraded WAN to full T1 to each school



History of Computing in Fullerton

Implementation of PowerSchool SIS
2002-03

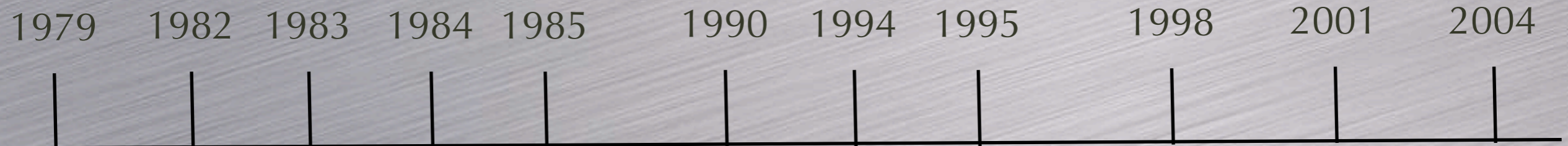
- Web-based student information system
- Takes advantage of District network
- Staff, student and parent access



History of Computing in Fullerton

Modernization funding used to upgrade networks

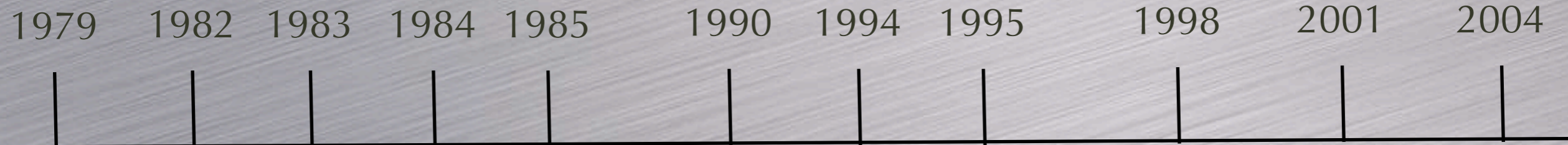
- Upgraded network electronics
- Fiber backbones between all main network locations



History of Computing in Fullerton

Growth of wireless network services

- Wireless capability provided in all Macintoshes beginning in 1999
- Wireless access points installed
- Rolling wireless laptop carts utilized



Educational Computing Trends

1979-2004

- Computer labs used to centralize costly resource
- Multiple computers in classrooms
- Increasing power of laptop computers
- Advent of wireless networking
- Portable, rolling computer labs
- One-to-one projects

One-to-One Projects

- Methodist Ladies' College (Melbourne, Grade 5 — 1990)
- Henrico County Public Schools, Virginia
- State of Maine
- Schaumburg, Illinois
- Peace River North, British Columbia
- San Lorenzo Unified School District
- New Hampshire Schools
- See: Laptops for Learning—<http://etc.usf.edu/L4L/>



Laptops for Learning

Final Report and Recommendations of the Laptops for Learning Task Force

March 22, 2004

Tina Barrios, Ph.D.	Chair, Laptops for Learning Task Force Supervisor of Instructional Technology, Manatee County
Judy Ambler	Supervisor of Instructional Technology, Pinellas County
Allen Anderson	Technology Resource Teacher, Cunningham Creek Elementary, St. Johns County
Paula Barton	School Superintendent, Baker County
Sharon Burnette	Teacher in Residence in the Executive Office of the Governor, Duval County
Carine Feyten, Ph.D.	Associate Dean, College of Education, University of South Florida
Jeff Gallup	Math teacher, Liberty Middle School, Orange County
Elisha Gonzalez- Bonnewitz	Assistant Principal, (K-8) Arbor Ridge School, Orange County
J. Christine Harmes, Ph.D.	Research Consultant, University of South Florida
Don Manderson	Director of Instructional Technology, Escambia County

One-to-One Projects

- Henrico County Public Schools
 - <http://www.henrico.k12.va.us/iBook/>
 - Grades 6-12 — 23,000 laptops
 - Began 2001
 - Survey: 8 out of 10 support continuing program
 - Survey results: <http://www.henrico.k12.va.us/>
 - http://www.henrico.k12.va.us/PublicRelations/PressRelease/laptop_survey.htm

One-to-One Projects

- State of Maine

- <http://www.state.me.us/mlte/>

- Grades 7-8 — 34,000 laptops

- Began 2002

- Evaluation: <http://www.state.me.us/mlte/>

- <http://www.state.me.us/mlte/pressroom/research/MLTIPhaseOneEvaluationReport2004.pdf>

General Findings

- Achievement scores improved
- Absence rates declined
- Collaborative, project-focused group work increased
- Development of 21st century skills
 - Independent learning
 - Peer collaboration
 - Skilled communication

Technologically Appropriate Learning for the Millennials!

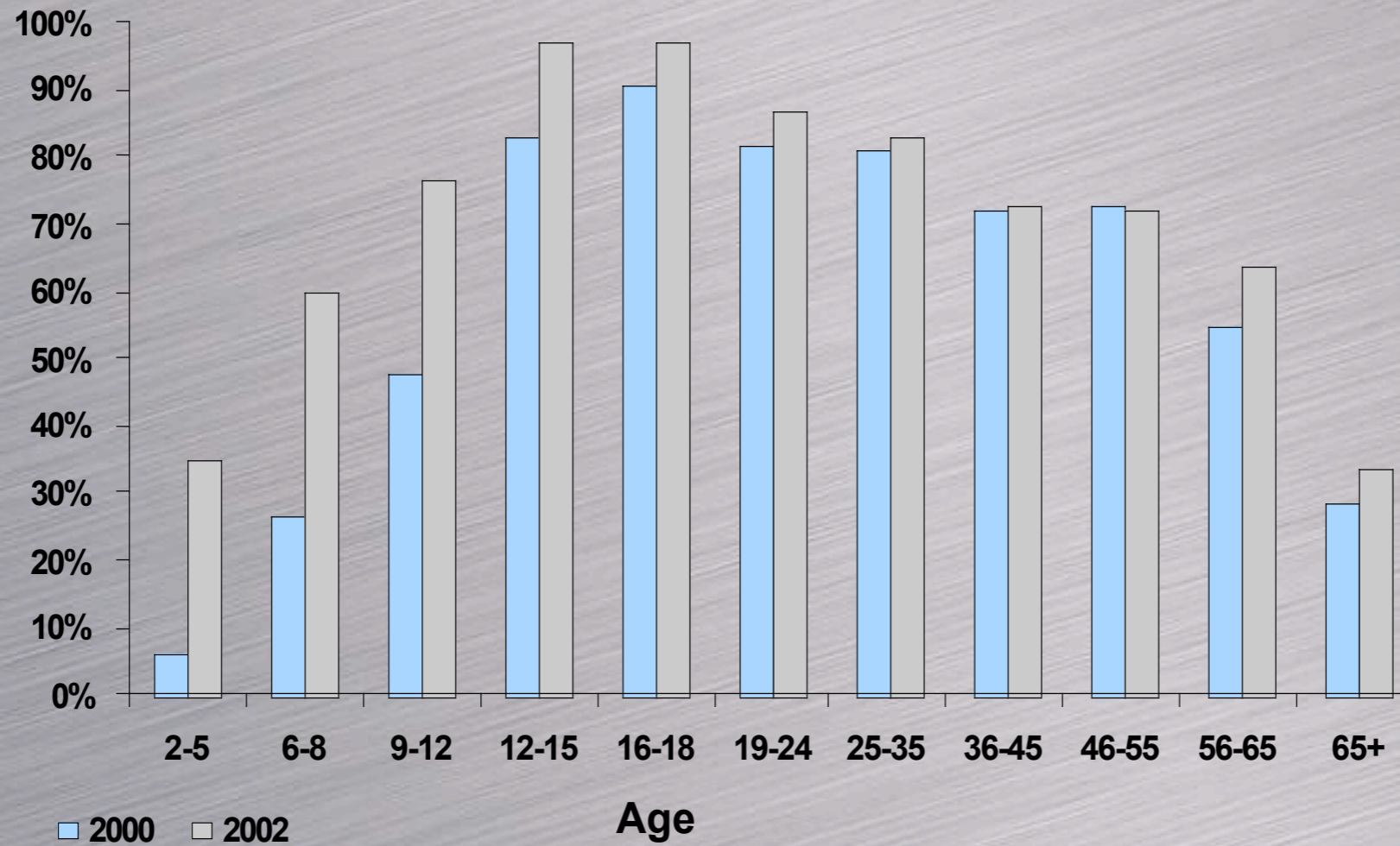
- What is our vision for the next five years?
- What resources do we have already?
- What are parents telling us?
- How do we assist staff in keeping current?
- What are studies projecting employment for the future telling us?
- Are our students different today?
- Are we adjusting to the needs of today's students?

Technology Improvements

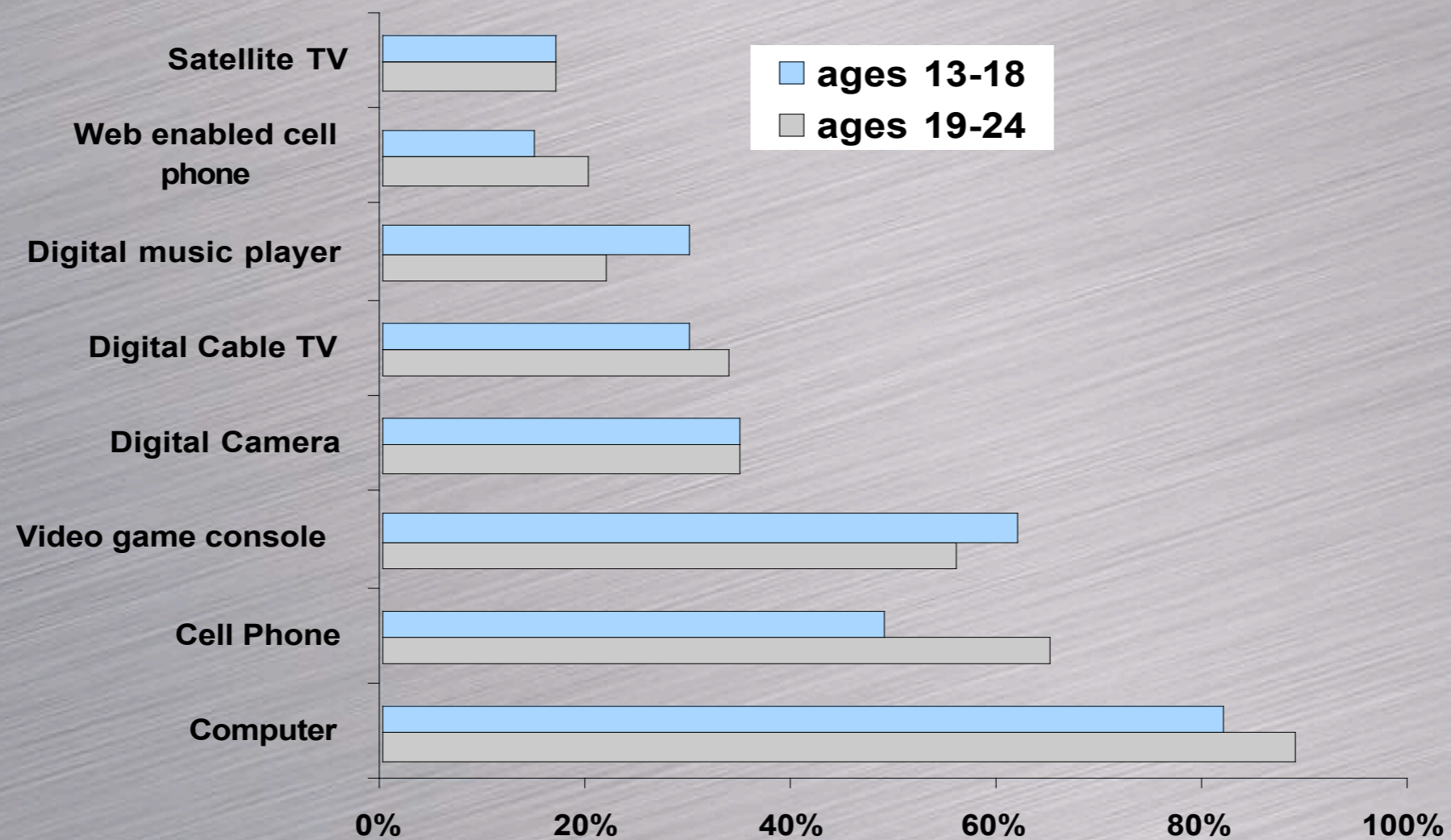
- High Speed Data Lines to All Schools and to the Internet
- Mobile Wireless Laptop Labs in Use
- Mobile Arts Bus
- Many Classrooms Moving Toward Four Student Computer Access
- Many Teachers Equipped with their Own Laptop



Internet Use by Age



Teen Access to a Variety of Technologies



Jobs Are Different



We Prepared for
One Career . . .
Kids Must Prepare
for Seven . . .

Charles Darwin is Known for The Survival of the Fittest

- What most people don't remember is that Darwin also said,
- The Fittest are not the Strongest
- Nor the Brightest
- But—those most adapted to Change!

Skills Are Different



So Why Aren't Schools Different?



**More Importantly,
Will Schools
Prepare Students to
Be Successful in
the Future?**

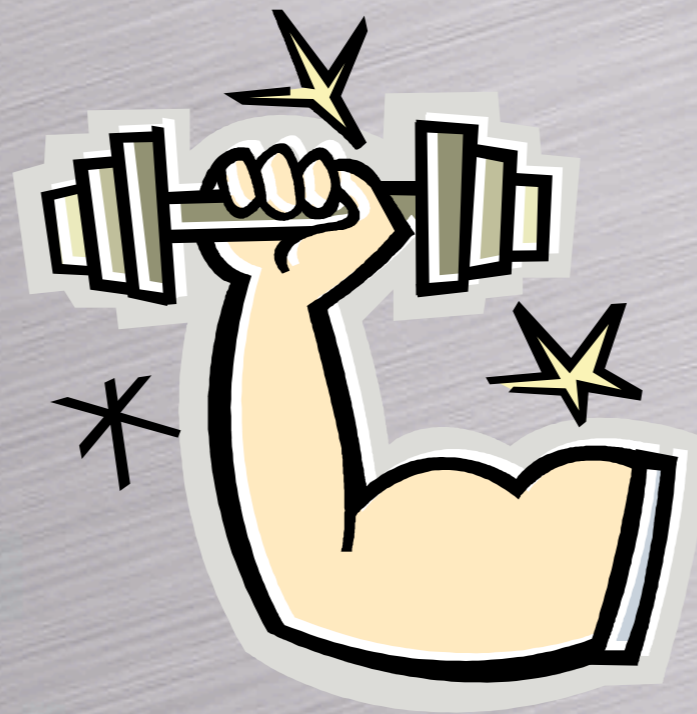


Their Future?

So What Can We Do?



**One Way to Make Certain that Our
Students are Prepared is
with Appropriate Technology**



PowerSchool

Student Information System

- Modern, Internet-Standards Based
- Accessed by Teachers & Administrators Using a Web Browser
 - Increases Access to Student Data 24/7
 - Facilitates the Use of Assessment and Proper Student Placement
 - Facilitates Home-School Communications
- Provides Parent Access to Student Information via Web Browser or Email
- Laptops will Provide Students and Families with 24/7 Access to the Internet and Their Own Data Base



What's Proposed Next?

One-to-One Laptops

- Implementation September 2004
 - Fisler K-8 (Grades 3-7)
 - Nicolas 7th Graders
 - Hermosa Drive GATE Program (Grades 4-6)
- What will it look like?
- Site/District Staffing?
- Books on computers?
- What are the finances?

What Needs to be Done?

- Fullerton Community Support
- Offsetting Costs Need to be Explored
 - An Increase in Attendance Saves the District \$\$
- Staff In-Service Is Critical!
- Next Step