

Teaching with Computers in Christian Education

By Neil MacQueen



Thanks for reading my book!

And more importantly, thank you for sharing your time and faith with the kids. Feel free to copy pages of this book to your teachers. If you have questions, don't hesitate to contact me. And be sure to visit my website. I have many more articles and online helps at www.sundaysoftware.com

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New Tools for a New Generation

About the Author:

Neil MacQueen is a Presbyterian minister specializing in Christian education and Christian software. Neil's Christian software work, has been "validated" as an interdenominational ministry by his denomination (PCUSA). This book is the product of his 30+ years of teaching kids and teaching with software in a church setting. It also reflects the experience of thousands of churches and computer lab teachers Neil has served through his Sunday Software development company. In addition to his software work, Neil currently serves a pastor to children, youth and family in his local church, and is the webmaster and a lesson editor at Rotation.org, a free curriculum ministry.

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You are encouraged to copy pages from this book for the purposes of training your teachers or working with software in Christian education. A special thank you to my software customers whose advice, experience and photos appear in this book.

Foreword to this new edition

Or is it “*forward*” ?

This book started as a collection of handouts to teachers and fellow pastors back in the 90’s. It has since been updated on a regular basis. However, the funny thing is that every time I go to update it, most of the TEACHING ADVICE STAYS THE SAME! Sure, the software, technical info and ideas change, but one thing has stayed constant: we TEACH with software, we don’t stand back. We get alongside the kids, help, ask questions, point things out as we go through it WITH them.

What HAS changed is the culture’s increasingly “individualistic” approach to using learning technology. The advent of tablets, iPads and smartphones have fueled this perception among the kids and adults. Pretty hard to share a 10” screen in a classroom, especially if you hand it to a kid. Increasingly, I hear from well-intentioned educators asking if we “have software for iPads.” I’m not discounting this future, but for now, that future is not yet. I have a full explanation of this issue in an article at my website.

Many of us continue to believe in COOPERATIVE LEARNING in Sunday School. We think there is something about learning a Bible story that is *better* when it is a **shared experience**. To that end, over the years I have taught, designed, and implored churches to buy computers and set up their labs in such a way as to FACILITATE cooperative learning, and not get in the way of it.

The last of the “new stuff” I want to share with you is this: I continue to be a WINDOWS FAN. I know that makes me uncool, especially to Apple-fans, but I’m a Microsoft Windows fan for Sunday School computing for one simple reason:

Good older software continues to RUN on newer Windows operating systems.

This is not true of other operating systems (Mac), and it’s certainly not true of the emerging tablet market. Your Christian software budget, and the Christian software market itself, are small. We need and want software we can re-use for years to come, on new, aging, or donated computers. And on that score, sticking with Windows is the only option.

After reading this book, feel free to hit my articles at www.sundaysoftware.com and email me at neil@sundaysoftware.com.

I also love to talk lesson plans.

Neil MacQueen

Introduction

Problem:

You can't teach a kid who isn't there, -or doesn't want to be there, -and isn't coming back.

One Terrific Solution:

Fun Bible software that attracts, teaches, and gives them a reason to come back!

This book is designed to help you make the most of this great opportunity. This book is about the joys and challenges of teaching with software in Christian education. It's about "the best advice" based on years of classroom experience. And it's about common mistakes and misconceptions. This book is *not* about replacing teachers with computers, or abandoning other great teaching methods. Computers in Christian education are here to help.

I've been working in the church as a staff person and volunteer for over 25 years to improve our teaching methods, teaching environment and teaching results. I have had experience with all sorts of creative, kid-attracting, result-producing approaches. But the first time in 1990 when I saw a child sit down at a computer running Christian software, I knew that a new and amazing tool had arrived. The only question after that was, "*what are the best ways to teach with this stuff?*" This book is part of my ministry to answer those questions.

You can use software to improve and supplement *any* part of your teaching ministry. Whether you are only occasionally bringing in your laptop to your class, or have a complete computer lab, the key is to be intentional, and resist thinking of it as merely an entertaining break, or way to look modern. This medium grabs their mind's attention, and that's a huge teaching opportunity that shouldn't be missed.

The teaching advice and concepts in this book apply whether you have a "Bible Computer lab" or a single borrowed laptop, whether you are using software in Sunday School, projecting it to a large group in children's worship, or a teacher with a laptop and projector who's looking for something different..

Where can you use computers in Christian education?

Here's a short list...

- Sunday School
- Children's Worship, Extended sessions
- Fellowship Night lessons
- Confirmation, Youth classes
- Vacation Bible School –add a computer station to virtually any VBS curriculum
- Special Summer programs
- Preschool/Daycare/Afterschool Programs
- Projecting images and multimedia from your software as backdrop for a sermon
- Using Software to present topics in Adult Education
- Special Need Kids

Because Sunday School is the number one venue for using computers, and my particular passion, I'll be talking mostly about *Sunday School computer labs* in this book.



If you're reading this sentence -odds are you have little or no experience teaching with software. Most of us didn't grow up learning this way and it's still relatively new. And notice that I said you probably didn't have experience "*teaching*" with software. You may be able to build a computer in the dark with one hand tied behind your back. Or you might be a veteran internet user or gamer. **But computers in Christian education isn't about teaching with hardware, surfing or gaming, or watching kids use computers, it's about *teaching kids*.** This is one of the first lessons I learned when I started using computers in my Sunday School back in 1990. In fact, when I started my first lab I knew nothing about computers or software. But I did know quite a lot about teaching kids. The challenge then and now was not to forget those insights when the screen turned on.

Teaching with software isn't hard; it's just new to most people. In some ways it is just like teaching with other media. You need to prepare ahead, and act as a guide rather than an observer. But in other ways it is different than traditional teaching. For one thing, **it's more "side-by-side" teaching than face-to-face.** When things are new, people tend to make assumptions and mistakes.

The most common misconception about teaching with software is that it will look a lot like the way they do it in the public schools: one computer or tablet per kid, equipment and kids lined up in a row, headphones, and the teacher wandering at a distance. Such solitary learning is not what Sunday School is all about.

Another misconception is that the software is going to do the work of the teacher. Not only is that not true, **it shouldn't become true.** Christian educators have always understood that the sharing between students and teachers is critical to sharing the Gospel. In fact, you could say the content only *becomes* the Gospel when it is shared person to person. One of the epiphanies I had about teaching at the computer was that the level of engagement opens up new opportunities to share and engage kids with God's Word –if I'm right there side by side with them.

As this book unfolds, we'll get deeper into all these issues, and more.



I love this lab photo from Community United Methodist Church in Monticello Minnesota. It's truly worth a thousand words about teaching with computers in Christian education.

Chapter 1: Almost Everything I Needed to Know about Teaching with Software, I Learned in 1990

It wasn't my idea to put two computers in our Sunday School back in 1990. I didn't use a computer, didn't own one, and had never heard of anyone using them in Sunday School. But we had just started the Workshop Rotation Model for Sunday School (www.rotation.org) and were looking for another "workshop"¹ to fill a room. A dad on our committee said his kids loved computers. He suggested we buy two brand new IBM 386sx PCs using his mother's memorial fund to start a computer workshop. "Surely you can find Christian software, can't you Neil?" The year was 1990. The computers cost us \$1800 a piece, had 640k of memory, and I could only find 3 Christian software programs. So began what I've often called, "**Mr. Toad's Wild Ride.**"

Those first couple of weeks were an eye-opener. Not only could we **not** get the children out of the computer workshop at the end of class, --we couldn't get their parents to leave the room either! One Sunday I was standing by the light switch unsuccessfully flipping it on and off to get people to leave, when one of my teachers came up to me and put his hand over the switch. He said, "*Imagine what this is going to be like when we finally figure out how to TEACH with these things!*"

Yes, imagine. Imagine kids who want to do whatever you put in front of them, as long as it's on the computer screen. Imagine their insatiable appetite for Bible content that's interactive and multimedia rich. Imagine kids who won't say a word across the table, but will eagerly express themselves through the computer. Imagine kids who can't wait to get into the lab, and are difficult to get out. Imagine people in your church saying things like "I've never seen anything work like this before." Imagine a child telling their parents, "I want to go to Sunday School, I want us to join that church." Imagine teaching a lesson where you don't have to worry about whether or not they will be bored.

I know that sounds like "hype" to some people. And when I first began teaching with software I wasn't sure the kids' interest would last. I wondered if it was a fad. Twenty years have passed, and kids are MORE eager to learn with these tools than ever before!

The hardware has changed quite a bit over the past two decades, and no doubt will continue to change in years to come. And the software is more interactive and engaging than ever. But I find it **strangely comforting** that most everything we needed to know about teaching with computers in Christian education, we figured out in that first year.

- We figured out that the software was not a replacement for a lesson plan or a teacher.
- We figured out that kids will and should work cooperatively at the computer, --that the computer was not a solitary learning device.
- And we figured out that the teachers needed to be right there with the kids as they went through the software, and not standing back or wandering the classroom.

We also figured out that the computers weren't merely "entertaining" the kids. As educators we knew that the brain love information presented in an interactive multimedia way. Our minds enjoy becoming engrossed. As teachers, we took note of how the computers engaged the kids' sense of play and love for story. We could see how the computer engaged the children's inquisitiveness, and desire to manipulate and explore. We also noticed that the kids' intense focus at the computer was suppressing their inclination to be distracted or disruptive. And when the mind is focused, it is happy, *and it remembers*. We saw it all that year. The only question was, "how to do it right."

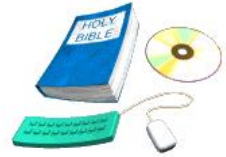
For detailed software descriptions and recommendations, free teaching materials for software, updated hardware recommendations, tech support and personal help with your lessons, visit my website:

www.sundaysoftware.com

About Sunday Software Inc.

In 1996, six years after starting our first lab at the church in Chicago where I was Associate Pastor, several of my Sunday School teachers and I formed a company we now call “Sunday Software.” This book you are reading is about the tenth version of our original Sunday Software manual. It began as a set of handouts created to help our teachers and other churches learn from our experience.

Since the early 90’s I have led seminars across the U.S. and Canada about computers in Christian education, and about a new way to do Sunday School called The Workshop Rotation Model.¹ Along the way, I created this software publishing ministry. Sunday Software began by distributing the best software we could find and giving away free lesson ideas and tech tips. I used to have a denominational publisher for this book, but they wouldn’t let me update it as often as I wanted to, so I took it back and now update it regularly, --saying what I want, the way I want to say it.



In 2001 we also began *producing* software for Sunday School, -taking our teaching insights and wish lists and putting them into programs of our own design. Sunday Software is now “the largest producer of Christian education software in the universe.” We’re also one of the only producers, -a minnow in a puddle.

Why are we one of the few? And why after all these years does the idea of using computers in Christian education still seem new or exotic to some? The answers to these questions are complex and not unimportant. Historically speaking, the Church is often “flat-footed” when it comes to new technologies and approaches. And it’s still true of denominations, publishers, and churches here in the 21st Century.

Computers and software ARE more expensive than construction paper and popsicle stick crafts. So it’s important to do this right. But it will be a lot more “expensive” to allow Sunday Schools to decline even further. Future congregations are depending on what all of us do now. Computers in Christian Education can help reach this generation and the next. Sunday Software and this book are here to show you how.



This is a picture of two brothers at a church where I used to teach. They were in the lab more than anybody and loved it. Notice the sound divider on the left separating the brothers’ computer from another computer off camera to the left. Dividers to control sound are an important part of most lab layouts.

The photo on the right is the first computer lab photo I ever took. It features Coco and Dan in front of our 386 with the big 5.25 Floppy drives. They’re using Parson’s Bible Atlas 1.0!

¹ My church was using the Workshop Rotation Model for Sunday School where classrooms were converted to media specific “workshops” to teach Bible stories. For more information about this model, go to www.rotation.org. You don’t have to use the Rotation Model to use computers in C.E., but many of the ideas about managing your teachers and rotating kids into your lab will be the same. Many people also know me as “the Rotation guy”.

Chapter 2: We are Not Drunk, Acts 2:15

You buying this book probably means you don't need to be convinced of the following. But you *will* need to be prepared to preach it.

Back when I started teaching with software in Sunday School, quite a few Church folks thought computers in Christian education were pie-in-the-sky, or worse. **"Too expensive,"** they said. **"It's a fad,"** they tisked. **"It's elitist,"** they sniffed. Few people owned a personal computer back then, and many churches still didn't have one in the office. (Nowadays, they opine, "our kids spend too much time in front of screen!")

Talking about computers for the Sunday School back then, and even today is a lot like being a disciple at the first Pentecost. **"They're drunk on new wine,"** the naysayers and bystanders shouted. They didn't understand or have any experience with these things. And people tend to fear what they don't understand. There were other types of naysayers over the years. Some of the naysaying came from the publishers who feared the costly investment of developing software for an unproven market.

Even today, there are some people who still don't get it. Every church has a few. They think beige walls, folding chairs and open Bibles are the only "real" teaching tools we need to reach kids. **They want media in worship for themselves, and understand why you need to upgrade the church secretary's computer, but can't imagine why you'd want to invest in a computer for the kids.** Acts Chapter 2 is the perfect answer to those whose imaginations have run dry.

It's Pentecost, and the Disciples are holed-up in their upper room wondering what to do next. Outside the safe house people are streaming into the city for the feast. The Holy Spirit literally blows the doors off the holed-up church and sends the Disciples out into the crowds to share the Gospel. But the Holy Spirit doesn't just send us out with a cheerful attitude. The Spirit gives us new gifts. **At Pentecost, the Disciples receive the gift of speaking in new languages, in new ways, and in a new place.**

And the Bible says the hearers were amazed! "Hey, we can actually understand these religious teachers!" they say in Acts 2. And that's when the naysayers show up. "They're drunk." "They shouldn't be talking like this." "What's wrong with the way we've always done it?" "It's too expensive." "It caters to the kids too much." "It's too new." Sound familiar?

It is at this very moment, the choice between "agree" and "disagree," "spine" and "no spine" that the Disciples become leaders, and the church is born. Peter the weak-kneed, Christ denying, Galilee Sea-sinking disciple steps forward and says, "No, we're not drunk. It's only 9 o'clock on Sunday morning." (If that's not about Sunday School nothing is!) Peter finally becomes *The Rock* only when he defends the new gift which seems to be bringing good results. "Come join us" he says.

WE STILL LIVE IN A PENTECOST WORLD. All around us there are children who need to hear the Gospel in a way that's understandable and attractive to them. Christian software is one great new way of doing just that. It's not the only way. I like to teach with many different types of media in many different settings. But ever since my first day in the lab, it was obvious to me that computer software helped us speak the world's most important story in THEIR language; --something they understood, were astonished by, and wanted more of. I didn't need a brickbat to get my attention; I just had to figure out how to get this right, not only for the sake of the kids, but for the sake of the naysayers as well. They needed to be brought along.

No doubt you will encounter naysayers when you want to teach with Christian software.

In particular are those who worry about "spending too much time in front of the screen." When a parent tells me that, I call their bluff by asking, "why should we cut back in church when we are doing it right? Cut back on mindless games at home!" We need to help parents understand WHY and how we want to teach with software. We need to convince them that our "screen time" is in the service of God, whereas, perhaps their kids' mindless game apps are less so.

**In every generation the Spirit leads us to share God’s Word
in ways that are exciting and amazing to the hearer.
...and in every generation, there are naysayers.**

The Case for Computers in Christian Education

The “foreigners” in Acts 2 are our kids. They have come to us not knowing the Gospel. And as the Spirit leads, it’s our job to share that Gospel in an astonishing and fresh way that makes sense to THEM. It’s our task to speak the Gospel in a language that meets *their* needs. This is the gift given to the church at Pentecost. In fact, the Church was born with that gift.

Speaking in new ways is a mark of being the church.

Teaching the Gospel in amazing ways should be the rule, not the exception.

When I meet a naysayer, I take them on passionately and directly. I want to change their mind. I want them to hear Peter saying “it’s time to have dreams again.” (Acts 2: 17). I also tell the naysayers about the cost of NOT being “astonishing” in our teaching. I make the stakes clear: if we bore children and youth, we are also teaching them that church is boring, the Bible is boring, you are boring, and by default—God is boring. Boring methods teach kids not to come back. Boring lessons teach them not to pay attention. I tell them that Christian software not only attracts kids to the content, it makes YOU look good. It teaches God’s Word AND teaches them that church is a good place to be. This is a hard argument to oppose –if they are serious about wanting to share the message.

Reverend Stacy Ikard at John Knox Presbyterian in Florissant MO emailed this story:

A group of people were standing in the church office at the end of the Sunday School hour. One man said to another, “I just don’t understand why we are spending so much money on computers and software. This is a real waste of money. Kids don’t need these things.” A couple of us overheard him, and were about ready to respond when all of the sudden an eight year old boy burst into the office. “Grandpa, Grandpa, I answered all the questions and the walls of Jericho just fell down! It was great!” The Grandpa hugged his grandson, and then turned to his disgruntled friend and said, “THIS is why we spend money on computers and software.”

Here’s my “Chocolate Cake” story... a lab experience in my own church that I had several years ago.

A few years ago we set up two tents in Fellowship Hall for the summer. We put one computer in each tent and spread sleeping bags inside in front of each screen. On Pentecost Sunday we had the fourth and fifth graders and a teacher in each tent studying the Life of Paul CD. At the end of our class time, adults began pouring into the hall for coffee and a slice of “Chocolate Pentecost Birthday Cake.” They were followed by children from other classrooms. A crowd of adults and children soon gathered at the tents where our older kids were still finishing up the Paul quiz show on the CD. With chocolate cake in plain view, the kids in the tent didn’t move a muscle. They wanted to finish their lesson. Who would have thought kids like computers lessons better than chocolate cake. Younger children trying to pile into the tents were told they couldn’t bring in their chocolate cake. So they stood at the tent door wolfing down their cake, and then climbed on in. It was a sign from God.

One of the things I like about teaching with software is that it has challenged long held beliefs and assumptions. Did you ever think there would be a teaching tool that kids liked better than chocolate cake? And what about attention spans? For the past several years I have had the pleasure of preschoolers rotating into our computer lab. Conventional wisdom said they only had a 5 to 10 minute attention span, and needed several activities, potty breaks, and a snack time during the lesson. Yet in the computer lab, our preschoolers happily spend 30 minutes or more with their teachers at the computers without interruption.

“Kids love our computer lab” --I could spend the next two pages quoting teachers and pastors saying that over and over (and our website has some of those quotes). But I suspect you already “get that.” Naysayers probably get it too. Thus, the REAL question isn’t “what do kids love.” It’s “how do we get results from it!” It isn’t good enough to just make kids and parents happy. Rather, we use computers in our teaching because there’s something special about this tool that helps children **learn and return to the Bible**, ...and makes them happy (along with their teachers, parents and pastor).

Rev. Mitch Phillips of Resurrection Lutheran in Indianapolis began teaching with computers in 1996. He emailed me this quote:

I knew the appeal the computers would have for our children. They have no fear around computers and they are so eager to work with them that there is absolutely no difficulty in getting them to engage that day’s Bible story. The bottom line for me though - as a pastor and also as a parent of a child in the computer lab - is that I see children learning about the Bible and growing in faith and discipleship. You’ve got a piece of the greatest story ever told and a tool that kids love to use - what a potent combination!

Why teaching with computer software improves learning...

Beginning a lesson with eager and happy students is a GREAT start. But there’s something more going on that just “happiness.” Much of the content of Christian software is EXACTLY what you’ve been teaching through other media. You’ll be teaching the story, you’ll be asking questions, and you’ll be reflecting on meaning. **But the kids will “hear it” differently because their learning senses and hearts are fully engaged.**

Learners are different when they learn at a computer

I’ve noticed this “difference” by sitting with hundreds of kids at the computer over many years. Their body language and speech is different. They are in a state of eagerness. And they become less aware of their surroundings as they “zone-in.” These “differences” have been borne out in the research as well.

Adults experience these differences too.

Have you ever surfed the Internet and lost track of time? The attractive nature of this medium can cause us to become unaware of how much time has passed. I regularly observe the phenomenon in my lab lessons. It’s easy to lose track of time in the computer lab because everyone is so engrossed in the software. (I have learned to shorten my lesson plans because time seems to slow down at the computer and we’ll spend more time at it than estimated.

Most children experience an intense connection to what’s on the screen. In fact, researchers have found that children with attention deficit disorders do better when learning at a computer than sitting in a classroom full of distractions. We see the same thing in Sunday School. **Computers command the part of our brain that wants to focus** and that helps block fidgety-ness. Kids are less of a distraction to each other and that allows them to stay on content longer. The result is simple: the mind remembers more of what it is focusing on.

This focal state phenomenon also reduces the number of discipline problems which the typical Sunday School class might encounter. In fact, *because* students want to use the computers SO much, the teacher has quite a bit of



Kids at the Springdale Pres Church, Louisville KY, -reading the Bible onscreen! Notice the boys and girls don't mind being with each other in close proximity. Computers change things.

actual leverage over the student should any poor behavior need to be corrected. Kids don't want to miss out using the computer. And those prone to watch the clock will lose track of time in the lab.

Years ago I had a student who had some attention and emotional problems. He couldn't handle other classroom environments very well, but he thrived in our computer lab. So we scheduled him in there as often as we could; and when he got a little older -he became a helper. This story has been repeated in numerous churches where trouble students have found a home in the computer lab.

Caution: All this “attraction” however, can work against you if you’re not careful.

Computers can compete with the teacher and the rest of the lesson content if you're not careful. Even the screensaver can be a problem during a discussion or as the kids sit at the discussion table at the start of class and can still see the screensaver. To demonstrate this “mind & eye attraction” to adults, I often play a trick on them during a seminar or training event. I turn on my computer and start my introduction while my screensaver slowly crawls across the screen. While I'm going on and on about how attractive multimedia is to kids, nearly every adult in the audience is watching that screensaver! A computer lab friend of mine describes her students' behavior with Bible software as “hunting.” Our minds are built to *hunt* for attractive information. The computer is built to present it.

Because of the excitement and intense focus, the teacher needs to:

- start lessons away from the computers with the screens turned off
- sit with students at the computer within their peripheral vision
- and not stick headphones on them if you want real sharing to occur at the computer

And now you also know why I believe that the kids themselves should be using the computer instead of watching *you* use a computer to lead a discussion. Some labs try to save money by buying a computer for the teacher and having the kids watch one big screen. Or they will use an LCD projector to project software on the wall for the entire class period. There is a time and place for all methods, but if you're looking for that intense learning state, the kids need to be in hands-on proximity to the computer. There IS a difference between active learning and passive learning. There is a difference in the learner and in the *learning* when the students are working in small groups at each computer. They must be close enough to get into that focal state we're looking for. And that includes getting their turn to navigate, -instead of watching someone else have all the fun. Some teachers like to control lesson content and control their kids like prison wardens. Unfortunately, it teaches kids, “I don't want to be here.” Teachers guide, pastor, model, and share.

Teachers are different when they teach with software...

Luanne Payne from the Hampton United Church in Hampton Ontario told us this story about teaching in her computer lab:

The first time I ever used a computer in Sunday School was in 1996. I took my 486 computer to Sunday School...and set it up facing the children. ...they were awestruck. We had a blast. ...Not a child left that day who didn't know the story forwards and backwards. Everyone participated; everyone had comments, questions, ooh's and aaah's. **In seven years of teaching Sunday School, I had never had so much fun or felt so rewarded at the end of class.** I left thinking there has to be a way to teach with computers. The question was “which” computers, and “what” software.



Luanne's class

It was not until the spring of 2000, four years later at a seminar, that I would find my answer. They used a video projector to show a sample of Christian software called “The Life of David.” Within a month of that meeting I had put a notice in our church bulletin asking for used computers. I traveled far and wide to several Christian bookstores and found three titles. When I joined the internet world, I found Sunday Software and Neil.... and the rest is history.

We are a small rural church with 5 to 15 children on Sunday. We now have two new computers. We’ve never looked back, and Bible literacy has never been so great.

A few years ago, I received a letter from Mary Ferris, an older teacher at the Union Church in Hinsdale Illinois. She was writing as part of our “why I like teaching in the Bible computer lab” essay contest.

Here is what she said:

After teaching 7th and 8th grade Sunday School for over twenty years, I admit, I was set in MY way of teaching. I was more than skeptical when asked to teach a five week trial unit to Middle School Youth in our brand new computer lab.....I was not computer savvy.....I have an assistant.... Honestly, the software has turned out to be so simple to use that if I needed to I could load and run the lab myself.

(Mary continues...) Aside from my fear of technology I was concerned that the youth would become bored after several weeks, that they would find the material dorky, nerdy, dull. I also had concerns that there would be no sense of community or sharing among the youth. After only two weeks I knew I was wrong on both counts. The five week trial has turned into a permanent Computer Bible class. The youth help each other... New people or visitors plug right in.

I will never go back to Sunday School as usual. The youth arrive early and don’t want to leave. For me as a teacher, it is gratifying.



Louise Waszak, a teacher at St. Luke United Methodist, Omaha Nebraska wrote this letter to us.

I’ve been teaching Sunday School for over 33 years and have seen a variety of approaches and curriculum. By far the biggest change was the addition of technology, specifically computers. When I first learned of the changes, I thought, “Okay, let’s give it a shot.” I was asked to take on responsibility for the working with the children in the computer lab.

It was amazing to watch the children go from “not too interested” ... to now having their favorite programs. They didn’t feel like they were in a formal lesson, but learning they were.

The parents have been fun to watch too. At first... all they saw was that the kids had spent their time playing computer games. We took the time each week to highlight what the children were working on.... they soon saw a change in their children. The parents saw not only the knowledge they were gaining, but their children went from “waiting at the church door to go home” to “having to pry their children away from Sunday School.” Their children even want to bring friends on Sunday.



Girls showing off their completed talking computer presentation in the St James United Church computer lab, Toronto

Things the Nay-sayers will say... and how you can respond:

Their Complaint:

The kids don't need this.

Your Response:

And the adults don't need padded pews, stained glass windows, and free coffee.

Their Complaint:

This is too expensive.

Your Response:

What's the cost of NOT attracting kids to Sunday School and not teaching them scripture to the best of our ability? Besides, that software is actually factually CHEAPER than buying your kids donut holes. Don't believe me? Check my math at www.sundaysoftware.com/cost.htm *Naysayers hate math.*

Their Complaint:

Kids already spend too much time in front of screens.

Your Response:

Yes, so reduce the amount of time they spend in front of mindless computer games, so they can spend more time in front of the Bible on the computer.

Their Complaint:

We didn't need these things when I was in Sunday School

Your Response:

Yes, and your great granddaddy didn't own a car or a phone. Should you give those up too? My grandfather's church had an outhouse, but alas, *time marches on.*

Their Complaint:

It's only for an hour or two a week!

Your Response:

Sounds like we should shut down the Sanctuary and church kitchen too.

Their Complaint:

Well, I guess we have to do it; these kids are spoiled by video games.

Your Response:

No more so than you were spoiled by the advent of radio and tv.

Their Complaint:

You're just 'drunk' on all this techno-hype.

Your Response:

(Like Peter said...) No, it's only Sunday morning, a time for amazement and astonishment.
...A time for dreams and visions.



I love this photo from “The Mouse House” lab at Stone Church in San Jose. It shows the teacher in the right place with a lesson handout in front of him. And it captures the kind of focus you get from the students when teaching with software.

Now let’s get deeper into the nuts and bolts of teaching with Christian software....

Chapter 3: Getting Started Advice

If you're in a small church with a handful of kids you may only need one or two computers, and your startup is likely to be easy. Most small churches can come up with a good teacher, some money for software, and one or two good used, borrowed, or new desktop computers with Windows without much trouble. Because your lab space needs are small, you can put your lab almost anywhere in the building.

If you're in a larger congregation, your equipment, space and staffing needs are a little more challenging. I've seen many larger churches stumble at startup because they generated enthusiasm and money, but didn't fully research the best way to do it. They loaded a room with kids and computers, and didn't support it with the right number of teachers, software budget or training. To churches of all sizes I say, "**Take your time, do the research, and create a small experiment to validate the advice in this book and bring teachers up to speed.**"

Now here comes one of the most important pieces of advice in this book:

★ ***Find the right person to lead this project.*** ★

If the person reading this book is not going to be the Lead Teacher in the lab, it is important that you find a Lead Teacher to focus on this project ...and then give them this book!

Who is "The Right Person" ?

The advice to "find the right person" might seem obvious, but in many churches, this is what they do *last*. Typically, a staff member or committee makes the commitment to start a Bible computer lab, purchases the equipment or finds used PCs, gets some software, then starts recruiting teachers. Let me suggest that's backwards. Time and again churches have told me **the reason for their success was finding the right person** to be in charge of the lab *from the beginning*. The reason projects often fail, is not because they don't have the right idea, but because they don't have the right leader. -And people get turned off when things don't go as expected. Especially with something new like computers, the volunteers can get intimidated if they don't have the proper leadership. And that "right person" often looks nothing like you expected them to.

The right person often isn't wearing a pocket protector. In fact, the right person may know very little about the technical side of computers. **The right person is a teacher first**, and perhaps a techie second. They will appreciate the idea that software is a component in a lesson plan, not a replacement for one. They know it's important to go through content with the kids, so they feel comfortable elbow to elbow at the computer screen. "Techies" sip coffee in the middle of the lab waiting for kids to need help or get done. Teachers naturally want to go through the content with their students. They look for points of engagement, and interject questions. Techies and non-teachers just want things to work and keep the kids happy.



Alan the lab teacher at the Lawrenceburg SDA Church in Lawrenceburg TN is "the right person."

My Best “Starting a Lab” Advice:

Find the right person and let them experiment for a while with one or two computers and a handful of software. **Don’t jump right in with a big purchase.** Do the reading. Experiment. Revisit your plan. Be realistic about your hardware needs. Don’t start with junk. Develop a reasonable software budget. Train!

Get the Numbers and Ratios Right

Ok...you’ve found the right person and done some experimenting. Now you’re ready to bring computers to a wider audience in your program. Most people begin to guess at how many computers they can afford or get their hands on. But let me suggest that you also ask, **“How many computers can we support?”**

First Church versus Second Church... a cautionary example about numbers

First Church gets excited about teaching with computers in Sunday School. They average 10 kids per class, and the pastor is so excited he finds someone to generously gift them with 6 new PCs. Then they discover that their only available room is 12’ x 16’, has two outlets, and barely enough room to stack the computers all in a row. They have found only one good lab leader for the year, and then are shocked at the first year’s software bill for 6 computers, so they cut their software list in half and figure they’ll “wing it.”

Second Church gets excited about teaching with computers. They average 10 kids per class, and have 2 donated Windows 8 PCs and one brand new computer in a 12’ x 20’ classroom. The Superintendent, who suggested the lab and will help teach in it, has found 2 teachers who are looking forward to being lead teachers in the lab.

First Church struggles. Second Church zooms. First Church soon has to put headphones on their kids to cut down on the noise generated by computers so close together. Second Church’s teachers, however, can sit with their students and talk through the software because their computers are spaced far enough apart and they have dividers that help block sound spray. First Church’s students zip through software and ask “what’s next?” because their one teacher isn’t nearby. Second Church’s students use the software at a “learning pace” because the teachers are at the computers guiding them. They stop and discuss what they’re seeing.

The two churches have the same software budget. But because First chooses to have six computers for ten kids, they can only afford about 5 different programs a year –which really puts a crimp into what they can teach. Whereas, Second Church with their 3 PCs can afford the software that teaches their subjects. Thus, by the end of year two, Second Church’s reusable software library is twice the size of First Church’s. The lab teacher at First Church wanders from computer to computer trying to see if kids are paying attention. Some First Church volunteers are afraid of all that equipment and won’t sign up to help. Teachers at Second Church enjoy the teaching because they are elbow-to-elbow with the kids, and thus, they say “yes” more often when asked to teach.

Here are my strongly recommended “numbers”:

- **1 computer for every 2.5 kids.**
- **1 teacher or assistant for every 2 computers.**
- **5 to 6 feet between each computer in the room.** (more details about this later)

These “numbers” are based on the collective wisdom of a few thousand churches.

Finding the right balance is important. When you have too many computers and too few kids, your budget per-PC and per-child becomes unsustainable, and your teachers are spread too thin. Conversely, when you have too many kids per computer, they get anxious waiting to “get their turn.” A ratio of “2.5” kids per computer works best. That means “sometimes 2 and sometimes 3.” I have often had no problem teaching with 3 kids per computer. Why? Our teachers are right there helping the kids and making sure everyone shares.

Take note that this is NOT the ratio which the public schools use. In the public school, the computer is a solitary learning device. In fact, the teacher is rarely near the computers at school. They make assignments and have the leverage of grading the results. Our content, values, and situation is different in the church.

Can You Have Too Many Computers? Yes, some churches are blessed with TOO MANY computers. Too many for their teachers to handle, too many for their room size, and too many for their software budget. Large labs also often can't generate enough teachers to help in proportion to their need. Or they are given a large sum to begin the lab and buy some software, but Year Two rolls around, the start-up money is gone, and the software budget can't support the large gift of hardware.



As seen above....DO NOT make the mistake of imitating how the public schools use computers. We are not testing and grading individual students. Our Sunday School values and content are different.

What if you cannot afford the right ratio of computers to students?

What if you have 9 kids and can only afford 2 computers and 2 sets of software? I can tell you now, 4.5 kids per computer won't work. The kids will get frustrated. If you must limit the number of computers, think of creative ways to adjust your schedule so that you can ALSO limit the number of students at the computer at any one time. Or... chose your software carefully. Some titles can work with larger numbers of kids at the computer than others. Quiz programs like Fall of Jericho, for example, usually work well with up to 8 kids per computer. Problem is, you can't use that program every single week. Over time, you will want to get the right ratio of computers to kids.

☞ **The most critical number for success in the lab is the ratio of teachers per computer.**

This is so important I'm going to type it again.... The most critical number for success is the ratio of teachers to computers. ← Here's an arrow so you know I'm super serious about that. In most churches, the best prepared teacher can only cover 2 computers at a time during the lesson –if they want to be elbow to elbow with the kids going through the software content –making comments and asking questions. It's a proximity issue.

If you can't see the screen and aren't close to the kids using the software, you can't possibly do the kind of teaching Sunday Schools value the most. **This means that if you are the lead teacher in a lab with 4 computers, you will need at least one teaching assistant to help you.** In my church's lab, we have two computers at one end of the room, and two at the other end. I sit between at the divider between the two computers at one end of the room. My assistant teacher sits across the room between the other two computers. This is a classic computer lab configuration that works very well. The divider helps reduce sound spray between computers, but I can see around it, and I can see what's happening across the room. In a lab with 3 computers, I would guide two of the stations and have my assistant be the guide at the third one.

“Getting Started” Equipment

Read my chapter on Computer Hardware before taking any donations of used equipment.

Good donated equipment is great, but old worn-out equipment is the last thing you want to start with. The number of horror stories and the amount of wasted time wrestling with worn-out computers is legion. People will donate used computers like they donate clothing to the clothing drive. You may find a few gems that someone outgrew, but usually old equipment is something someone is foisting it off on you. **Be picky.** Don't jump at the first computers people give you.

Borrowing good computers from members works for some churches. Scout around for those who are willing to bring in their laptops and help you run a few programs with the kids. Most computer users will be flattered you asked. And they may be a good source of future help. You can also start your experiment with the church office computers if they are capable. The kids' parents *did* pay for them, after all. If you're going to use the secretary's computer, decorate a bed sheet and lay it over the desk around the computer to keep kids from getting into the paperclips. Then have the kids leave a note for the secretary about what they learned. Works like a charm.



This picture from St. Thomas Presbyterian, Houston Texas won our Creative Computer Lab Photo Contest. Notice the CD curtain, and legs covered with flexible vent. But the real story behind this lab is that the computer laptops are all borrowed from church members. The computer lab experiment went so well that they were later given a donation of four good desktop computers. The teachers are standing in this photo, but in another photo they are right in there. You can see the “space theme” in better detail and color at www.sundaysoftware.com/contest

If you're one of the fortunate churches that has been **given a check** to start your lab (and quite a few labs do start with such a check), *go slow*. Don't run out and purchase what you “think” you'll need. Rather, start with one or two computers and a handful of kids. Get your feet wet. Identify the challenges.

Sometimes a church will get started based on someone else's lab they've seen. But I still offer the same advice to every start-up: **Find the right person, start small, go slow**. There is a “time for every great idea” and you want to see if the “time is now” ...or later for you and your program. The funds and the right person to help you implement your vision may be in your church right now. Or, they may be in the near future. Having said this, many churches have told me how surprised they were to discover that “the time was now.” They had a member or two who wouldn't give money for more folding chairs or construction paper, but were excited to catch your vision for teaching with software.

What about Projecting Software onto a Wall from One Computer?

Projecting software from a laptop is what some teachers in small classes do. Problem is, many titles are quite interactive, or play like games, and “interactivity” is part of what attracts and focuses the learner’s mind. Therefore, you’re not going to want to regularly project most titles if you have more than 3 kids.

Some labs will kick off a lesson by projecting some software on the wall for all to see. They do this using an LCD projector hooked up to a desktop or laptop. They might introduce the day’s software, or do a quick teacher-led presentation using a multimedia Bible or Atlas or powerpoint presentation. Then they’ll send the kids into software. This is a good way to teach certain lessons, -if the teacher knows what they’re doing.

Some churches project software for large groups, such as, children’s worship or all-group gatherings. They’ll pick out and project scenes or activities from a software program, such as an animation or music video. And you can project graphics from a program to dress up your event or stage. There are some great Biblical landscapes and illustrations in our software.

Many labs which have preschoolers coming into them will project software. This is helpful for two reasons:

1) The best preschool Bible software, Play and Learn Children’s Bible CD, doesn’t work on newer versions of Windows, so many labs will project it using an LCD projector hooked up to an older XP computer.

2) Too many preschoolers in a lab can overwhelm the equipment and teacher. The projector gives control to the teacher who invites students to come help them.

But... projecting interactive software to a large group is not the same as students interacting with teachers at computers where they are doing the navigating and are intensely focusing on the software in front of them. Watching *you* run the computer is no fun for the kids and doesn’t reap the same benefits as letting the kids get their hands on this interactive medium.

What about Smartboards and Tablets?

Read my extended article online about why these technologies aren’t a great idea for Sunday School.

A Basic “Starter Lab” Layout

This subject will be addressed more thoroughly in chapter 5 on Lab Design. When you’re getting started, don’t run out and buy computer furniture and chairs. Instead, set up your computers on a couple of classroom tables. **Put plenty of space between your computers to reduce sound competition.** Experiment with some short makeshift dividers between each computer (you’ll later want to turn them into nice looking ones). Create a discussion area away from the computers in the room. Don’t overwhelm your start-up plan or space with too many computers or kids. Putting 6 kids in front of a 15” laptop screen isn’t going to inspire anybody.

Don’t spend a lot of time creating your new lab in the very last and smallest room available. Your startup experiment will likely validate our advice not to put your lab in a room that’s too small. Once your experiment has begun, ideas about use and space will dawn on you and your leaders.

Start with a Plan and a Trial Run

Find one or two good computers, gather 3 to 5 kids, then pick a set of stories to teach and get the software to teach those stories. Create lesson plans. **Resist opening up the computer lab with a free-for-all atmosphere.** The question you want to answer is not whether computers will be popular with the kids. That’s a slam-dunk. What you want to establish is “what it’s like to teach with software,” and whether or not our advice here is valid. You want an experiment that teaches YOU something. You also want an experiment to gauge support for the kind of hardware and space you may need to ask for once your trial period is over.

Taking the Next Step... Creating Your First Bible Computer Lab

This next section deals with the costs of a “lab.” A “lab” can be any number of computers in any location that features intentional & on-going use of computers in Christian education.

Startup Questions to Ask:

1. Will you be starting with new or used computers?
2. Are you free to decide what to teach in the lab? Or do you have to follow a prescribed set of lessons?
3. Is your age range of classes using the lab narrow or broad?
4. Will you creating a permanent lab space or be creating something more portable or flexible?
5. How many modifications do you need to make to the space which will become your lab?

Question 1. Will you be starting with new or used computers?

New PCs are more expensive than donated. But some “free” donations may cost you in upgrades. Some donated equipment may come without an operating system. Older PCs may need ram and videoram upgrades. Sometimes donations don’t come with monitors.

Question 2. Are you free to decide what lessons to teach in the lab?

Or do you have to follow a prescribed set of lessons? If your lab must follow a prescribed curriculum (a scope and sequence of lessons) you would be well advised to look at the software available to TEACH those lessons, prior to making decisions about hardware. Why? --because if the lessons for Year One require newer software, donated older hardware might not work for you. Check your scope and sequence before deciding to take in old equipment.

If you must start with borderline hardware, you may want to let your lab have its own scope and sequence of lessons. No sense trying to teach a broad vision with limited software and hardware. Teach what you are able to run, and hope for better equipment!

Question 3. Is your age range of classes narrow or broad?

If your lab will host both preschoolers and teens, it will require a wider range of software. Thus, your initial software budget may be higher. If you have limited resources, focus on 2nd-5th graders to begin. Most C.E. software works well with elementary students who can read.

Question 4. Will your lab space be “dedicated” or have to be portable or flexible?

Dedicated lab space is much more convenient than share space or the requirements of a portable lab. However, due to certain circumstances, some churches must have portability, -usually a collection of laptops, which they port around to different spaces as needed. Some have tried rolling carts for their desktops, but find them cumbersome. Laptop labs are more expensive than desktop-based labs.

Question 5. How much will you have to modify the room to host your lab?

Some classrooms have old wiring that’s not up to code for today’s electronics. Updating the wiring can cost bucks. If security is an issue, you might also take that into account. You’ll also want to create a nice looking space that fits the equipment and isn’t so acoustically “live” that computer sounds will compete with each other. See my chapter on Acoustic Countermeasures for more details. In general, you don’t want to invest in expensive furniture or countertops. Tablecloth covered classroom tables are fine. And a dedicated lab space is easier to “theme” with decorations. Many churches go all out. See the pictures and miscellaneous notes on lab décor elsewhere in this book.



Entry to the “Peace.com Café” Computer Lab at First UMC, Van Wert Ohio

A word about Portable Labs...

Some churches need the portability of laptops due to space considerations. Some are simply enamored of the idea of laptops and tablets. A few words of experience and caution are due.

My Hardware chapter advises against laptops for most Sunday School situations. Their side-viewing angle is poor—which means the extra student or teacher trying sitting on the side won’t enjoy what’s on screen. Laptop navigation and volume controls are also harder for younger kids to use, and their sound systems tend to be weak. I would recommend them only where no other options are available. Tablets are more of the same issue, and have very little in the way of content-rich Christian software/apps available for them.

Some churches have tried making laptops available so their regular classroom teachers or fellowship leaders can “sign out” the laptops (much like churches handle other A-V equipment). But the majority experience with that approach says that you will be disappointed by *how often* and *how well* your laptops are used when signed out. When the option to use the computers is given to the typical volunteer teacher they will use them as a “break” from teaching, -a “play day.” That’s an expensive way to entertain your kids. The solution: create a schedule, and train a special “laptop lab teacher” who will GO WITH the laptops and be the Lead Teacher in the other teacher’s classroom. Better yet, save money and create a dedicated lab space. *More on how to set that up in a later chapter.*

A Realistic Software Budget

Let’s assume you’re going to dedicate a space for several desktops, and you’re going to use them every Sunday, and occasionally with your Fellowship program. What’s sort of software budget will you need?

If you have a teaching plan and some good computers capable of running the software that matches up to your scope & sequence of stories, then in the first year or two, **a reasonable software budget would be about \$100 per computer per year.** That will buy you about 6 or 7 of the same programs for each computer. And remember, all that software will get reused over the next couple of years. Later in this chapter I’ll list some of the likely good titles you’ll need to get started with.

In most cases, you will need to buy identical software for each computer so the teacher can lead the entire class on the same subject. This means if you want everyone to be using Prodigal Son CD and have four computers you will need to purchase four copies. This will allow all the students and teachers to work on the same topic at the same time. **It’s nearly impossible to manage a lab where every computer is using a different CD.** Some have tried. It drives teachers batty. And finding new teachers is a lot harder than finding money for the right number of software copies.

★ **A Reminder: in most cases you cannot buy one CD and copy or install it to multiple computers.** That is against the law. Unless you have a site license for that program you will need multiple copies of it if you want all your computers using it at the same time. Very few CDs have licenses. Most you will have to buy in quantity.

Fortunately, many CDs come with quantity discounts. The cost of multiple copies is another reason why you want to control the number of computers in your lab.

To save on the need for multiple copies, it is possible to create a Bible computer lab where the kids at each computer are **working independently with different programs** at each computer station. But it's really hard to do. Many have tried, and few have succeeded. There are several reasons why "independent study" labs have not worked out. The biggest reason is time management. Few volunteer programs can manage individual kids on individual programs over a period of time. Because our attendance isn't compulsory like it is in the public schools, you never know for sure who's going to be there. And we don't have the leverage of grading their use of the software like they do in the public schools. We have "volunteer students" who require our *going through the software with them*. Independent study also requires our volunteers to know every program, since each student will be working on a different program. But most volunteer teachers can only prepare on one program at a time.

Here are some budget saving insights:

Attendance fluctuates during the year in most churches. This means that during low attendance times of the year you can probably turn off one or more of your computers to maintain your 2.5 students per computer ratio. For example: if you're buying software for Spring and Summer use, you may only need 2 copies of a program rather than the usual 3 because you'll be turning one of your computers off due to lower attendance.

One of the hardest things about buying multiple copies, other than the multiple price, is when you have **wildly fluctuating class sizes**. If you rotate a new grade group into your lab each week, how many copies of the new software do you need when the 2nd and 3rd graders will have 10 students, but the 4th and 5th graders will only have 5? A lot depends on the particular program you're thinking about buying. Some programs work better with 3 kids at them, while other CDs work out better with just two students per computer. And you may like certain CDs better. The best solution is to preview one copy of the program WAY AHEAD of the time. Preview it with various class sizes and class chemistry in mind, then decide how many more copies to get. Example: Let's say you have 3 computers, average 7 kids per class, and you're looking at a program you will use frequently. It's probably a good idea to go ahead and get 3 copies. But let's say you are buying a program you think you'll only need for two or three weeks this year. You might just get 2 copies of the program and huddle up your 7 kids around the 2 computers when it comes time to use it.

There are some software programs you might only need one copy of to present on one computer as an introduction. Bibles on CD/DVD and Bible Atlas CD sometimes function this way. The teacher will say "come over here, I have a Bible Atlas screen I want to show you to start our lesson." In another example... A quiz program like Bible Grand Slam can handle 3 to 5 kids per computer. So in your 3-computer lab, you might only need to buy and install 2 copies of Grand Slam, and leave computer #3 turned off.

A program's LONG TERM USEFULNESS is a very important factor in figuring your software budget. Some programs are worth getting the right number of copies because you know you'll use them year in and year out. This is where **having a long-term lesson scope & sequence helps you budget wisely**. For example, if you are looking at getting Galilee Flyer CD with its four Jesus lessons, and plan on using it once this year, but twice next year, then it's a wise purchase. Unlike traditional print curriculum, your software purchases are not dated, "one & done." Software is not like art supplies which get used up or walk out the door.

The Real Cost of Software

Some folks look at software and say "that's too expensive." I like to tell them that, "Boring more kids away from church is the real "too expensive!!!" In fact, **software is cheaper than donuts, and this next page will demonstrate...**



Example: Say you have four computers and need to buy four copies of Galilee Flyer CD at \$18 a piece. That will cost you \$72. Now let's say you have four groups of kids who will rotate into your lab to use each of the four lessons on the CD. That's 16 times each CD will get used (4 groups x 4 lessons). The \$18 CD divided by 16 lesson uses = **\$1.12 per CD each time you use it.**

Now let's figure that you have 2 kids per computer when that CD is taught with. \$1.12 divided by 2 kids = **56 cents per student.** And if after four years you reuse Galilee Flyer with the next bunch of kids coming up in the program, your **cost per pupil is 28 cents.** That's less than the supplies for an art project or the donut you bought them. It's also less expensive than the free cup of coffee your naysayer is sipping.

You can't teach with Galilee Flyer all year. You'll need other software. Some programs like Life of Christ, Fluffy's Christmas, Kid Pix, and Let's Talk CD often get used for 5 or 6 lessons each year –over a period of several years! I've used the same copy of Life of Christ CD for 7+ years. We definitely got our money's worth. And some CDs have nice quantity discounts that make them cheaper than \$18 per copy. So depending on what you need, **you can roughly estimate that each time you pull out a CD, your software will cost you around 20 cents to 50 cents per pupil per week.** Even twice that is still a bargain.

As I type this, I can think of **12** CDs which I'm still using after more than 10 years! Oldies can still be goodies. And this drives down the "per pupil" cost even further. In the case of Galilee Flyer, my students have turned it on *after* class and played it probably 25 times over the past three years after we taught with it.



I've had some people point out that this "per student cost" doesn't take into account the hardware, and that's true. If your computers were donated, the cost is minimal, maybe a new videocard or mouse. New computers are great if you can afford them. But be careful of those who will take pride in new hardware, then turn around and stifle your software budget. It happens in the public schools all the time. They tend to have new equipment and not enough software to go around. You can't teach with the screensaver.

Ok, so what about the Cost of Computer Hardware ? \$2.35 a week!

Let's go ahead and bravely take into account the cost of **three brand new budget Dell computers** (\$250 each x 3). Pro-rate their cost over 8 years –the average life expectancy of new computers used in Christian education. \$750 divided by 8 years = \$94 per year *total* for the hardware. Now divide \$94 a year for those three computers by 40 Sundays a year, (40 being the average number of weeks they may get used on Sunday). \$94 divided by 40 = **\$2.35 a week.** My church spends that much on disposable coffee cups. One educator pointed out that their weekly children's offering EXCEEDS the estimated weekly cost of their hardware, *all* their software, and all their other weekly supplies usage.

One Last "Real Cost" to figure in...

What is the ACTUAL cost of LOSING our kids through the backdoor? What will it cost the church 10 and 20 years from now to have lost kids and families because we didn't try our best to attract them and teach them? What's the price of empty pews or biblical illiteracy?

I don't want you to misunderstand the last page's argument. I'm not interested in saving money in the church, I'm interested in getting results. A lot of us started teaching with computers when they were four times as expensive, and the software was twice as expensive. And it was worth it then because we got results.

I'm sticking my hated-face in the book at this point. A few years back "I lost my ability to hide my incredulity"TM at the choices some churches make and attitudes some people have. It has aged me as you can tell. When it comes to this young generation of "Pentecost foreigners" in our midst, I don't suffer fools or fool's math, and would encourage you to do the same. **\$2.35 a week for 3 new computers. 28 cents per pupil per week for software.** If your church can't afford this, then the problem isn't with your budget.

A Typical Startup Schedule

Most churches rotate different age groups into their lab each week. This week it's the first and second graders, next week the third and fourth graders, and on the third week it's the fifth and sixth graders, and so on. **Each of these groups will typically use the same software, similar lesson plan, and same lab teacher.** Some churches will assign a class to the computer lab for several weeks in a row. Read Chapter 7 for more about scheduling your lab.

☞ **It's very important to keep the same lab leaders week in and week out.** Teachers learn by repetition too. And they'll learn how to better teach with the software each time they teach with it. By staying with the same lesson for a number of weeks, it also slows down your need for different software and saves you money. The *Workshop Rotation Model* for Sunday School (www.rotation.org) uses this same strategy. Rotating students and keeping the same teacher in the lab makes sense *whatever model* you are using for your program.

Some good first choices for software

Your list might look slightly different depending on your choice of lessons, age range and schedule, but here's a typical first year's software library.

- Life of Christ CD (Jesus is a popular guy in the curriculum)
- Jesus in Space CD (a new program with 3 popular Jesus stories)
- Kid Pix CD (a creative writing/illustration program you can use with many stories)
- Let's Talk CD (a discussion starting, lesson creating program to use with many stories)
- Cal & Marty's Scripture Memory Game CD (memory verse work is fun on the computer)
- Awesome Bible Stories CD (six popular stories) or Galilee Flyer CD (four stories)

Choosing four or five of the preceding titles and buying one copy for each computer will run you about \$80 *per computer*. Each of these programs will give you many years of use. And remember, your first year start-up budget is about \$120-ish per computer.

The other \$40 per computer in your start-up budget will be spent on some **story-specific software** required by your schedule. For \$40 per computer, you might grab four copies of three of the following titles to round out your \$120 software budget: Fluffy and God's Amazing Christmas Adventure CD, The Ten Commandments CD, or Exodus Adventures CD. It depends, of course, on the lessons you have to teach, and whether or not your hardware can run some or all of these CDs (they 'should' be able to). If you have less than \$120 per computer to spend, consider creating your computer lab lesson schedule around the software you CAN afford. It's either that or reducing the number of computers you need to buy for.

Most "Story-specific" CDs, such as Awesome Bible CD or Jesus in Space CD, are like onscreen Bible studies. They are laid out like a lesson plan, with **open, dig, and reflection activities, and onscreen quizzes and discussion questions built right into the software.** Story-specific software makes it really easy for the teachers in your lab. Non-story specific programs, such as, Kid Pix, Let's Talk or Cal & Marty are programs that students use to create content after *you* have taught them the story in a study. Over time, you'll acquire both types of software in your library.

In your second year, you will likely reuse half of what you already have. Advent and Jesus stories come around every year. Thus, in your second year's software budget you might only need to buy 2 or 3 new CDs per computer to meet your scheduled lesson needs. If you have four computers, that's 4 copies each of 3 new titles, or somewhere around \$80 per computer to cover second year purchases for your entire lab. In year three, your 'new software budget could be as low as \$30 per computer because you now have a larger library to pull from. Depends on your teaching schedule. By year three you'll have an impressive software library that you will be able to draw from for the next 6 to 8 years, supplementing with new software as needed.

Important information about software site licensing and copyrights.

Most Christian software is licensed for running/installation on one computer only. You can't make copies, you can't network to one copy, and you can't install from one copy to more than one computer. That's illegal. Do not let someone's bad planning, poor budget, or shady advice lead you to teach with stolen materials!

Sunday Software Inc was the first Christian developer to introduce regular quantity pricing for Christian software, and site licenses for a select number of titles. Visit www.sundaysoftware.com for the latest pricing details. And don't be afraid to ask for help. Many people are surprised when I suggest a way to spend LESS on software than they had expected. Read Chapter 4 for more software details.

Definition of a Computer "Lab"

I use the phrase "computer lab" a lot, so let me stop and define it a little more closely.

"Lab" to me means "intentional educational use," not a room full of computers". **Your lab can be as small as one good computer, one good program and one good teacher who knows what to do.** By my definition, your lab could be in the church hallway, or in the fifth grader classroom where the teacher brings in their laptop. Or maybe you rotate kids into a "computer lab" that has 3 new computers and a well prepared lab leader. Or maybe your computer lab has to service 20 kids at a time, so you find 8 or 9 used computers and place them around a large room. For the purposes of "getting started," I strongly encourage you to start small. Sometimes "less is more." Spending money with a plan or some personal experience is not a computer lab, --it's poor judgment.



Computers in an indoor tent for VBS

Bible Computer Labs can be implemented to teach specific set of subjects using a select group of software and age group, or they can match up to Bible stories in your curriculum's scope and sequence for many age groups. A lab can have a select few titles, or a library of software that grows each year and is drawn upon for many years to come.

☞ **Creating a dedicated lab space is a really good idea.** But "creating a dedicated lab teacher" is an even better idea. Most churches tell me that "finding that one right person" who will preview and prepare with the software is the most important thing you can do. Setting up a room full of computers and inviting classes to come use it is not enough. In fact, it's the quickest route to disaster. Years of experience and feedback have told us that **the lab needs its own teacher.** Teachers who are not prepared and only use the lab once in a while tend to view the lab as a break from teaching, -a joy ride. Instead, recruit "that one person" and rotate your teachers with their classes into that person's lab. Pick the right person and you can put them almost anywhere and they'll do well. Pick the wrong people to lead, and everything else can go to waste.



Chapter 4: Software

Most people new to teaching with software are surprised by the wide variety of software, and how different each program can be from the next to teach with. For some reason they expect it to all look the same. If you haven't seen much Christian education software, you're in for a treat. I recommend previewing a few titles before starting a lab.

Types of Christian Software

Christian software tends to fall into five categories:

1. Bible Study Tools Software
2. Interactive Bible Story Software
3. Bible Quiz Software
4. Bible Games Software
5. Creativity Software



Awesome Bible Stories CD is a good example of "Interactive Bible Story software"

One reason I like to “classify” software is that it helps to understand **where in the lesson** plan the software will most likely fit. A creativity program for example, fits in the middle of a lesson **AFTER** the Bible study, whereas, a program like Awesome Bible Stories **HAS** the Bible content and study material in it, along with games and reflection activities. Some programs will fit into your lesson plan differently depending on the type of software they are. **MOST** of our titles have features in them found in all 5 types of software.

1. Bible Study Tools include programs such as, The GLO Bible which has the entire Bible on CD with searchable notes, outlines, map, pictures, videos, articles, and more. Some computer lab teachers really like these more “serious” tools, and like to see their students using them. Some teachers will present with these programs to introduce a story –and then send the kids into more kid-friendly programs.

In a typical lesson plan using a Bible Tool CD, students are on the computer for about 5 minutes viewing verses, reading background notes and pop-up info, and taking in some multimedia on the subject of the day. The teacher will often give students a handout that guides them through the tool and has questions for them to answer along the way. It's very common for Bible Tools to be followed-up with other software, such as a quiz program that test them on what they just read or saw. Should your lab have the entire Bible available on the computer? Some churches do, some don't. Depends on your preferences and budget.

2. Interactive Bible Story Software CDs are more kid & teacher-friendly than Bible Tools software because they are more fun, and have more lesson content built-in. In addition to interactive stories, most story titles include discussion questions, quizzes and reflection activities. Good examples of this type of software are Awesome Bible Stories CD, Elijah & Jonah, and Good Sam the Samaritan. Each of these three programs has been designed to first teach the story, then, introduce background and explanatory content in a kid-friendly format, plus offer up questions to discuss. They include mini-quizzes, and games about the content. Teachers especially appreciate Bible story programs that help do the Bible Study, help with discussion, and provide plenty of kid-friendly activities. They just have to guide the kids through the content in the correct order.

3. Bible Quiz Software CDs include famous programs such as Fall of Jericho Quiz making CD and Cal & Marty's Scripture Memory Game CD. Kids enjoy quizzes and memory work on the computer. Each of these programs comes with a **content editor**. Editors allow the teacher or student to edit in their own questions and verses to create their own quiz or verse. Because they can be used with many subjects, Bible quiz programs are popular first choices in many computer labs. Bible Quiz programs are often used *after* your Bible study. Or they can follow use of

another program, such as time spent with a Bible Tool program. Some story programs, such as Elijah & Jonah CD, have quiz questions that pop-up in the middle of the story, as well as at the end of the story.

4. Bible Game Software is another broad category. Similar to some of the Bible story software, Bible games may teach the story, but do so with more of a game-like interface. Galilee Flyer CD is a good example of Bible game software that's content rich. Students fly the friendly skies over the Sea of Galilee to study one of four selected lessons. After successfully completing their mission-lesson, they must land back on the airstrip without crashing -in order to receive their "pilot ranking." Game-like software usually contains quiz questions or clues that must be answered in order to advance. Other popular CDs in this category include Bongo Loves the Bible CD, Exodus Adventures CD, Faith through the Roof CD, and Joseph's Story CD. These programs play like video games, which make them kid favorites. But they are designed to deliver the story and study points.

5. Creativity Software includes favorites such as, Kid Pix and Let's Talk CD. Kid Pix, the creative writing and illustrating program, has long been a staple in the Bible computer lab movement, allowing us to create "talking pages and Bible storybooks." They do not come with Christian content built into them. Your students create illustrated pages and presentations that reflect on content. In both Kid Pix and Let's Talk CDs, whatever the kids type the computer will speak aloud. Because Kid Pix software can be used with any story, it is a versatile program most labs get first. It's also a "go-to" program if you have a lot of younger children using your lab. But be careful not to over-use it.

Let's Talk CD is a versatile program that's a combination of a "creativity, quizzing, and discussion-starting" tool. Teachers and/or students create their own presentations and discussion questions which the computer will speak aloud. It includes an "instant message" interface that allows your student to respond to your questions by making their onscreen character speak their words. Kids who never make a peep in a traditional lesson suddenly have lots to say when the computer character will do it for them. Children and youth can also create end of the class prayers which the computer prays aloud for them. They love that and it gets them to open up. Ages 6 to teen.

Other content creation programs include wordprocessors and PowerPoint. Because many churches already own site licenses for these program installed in the office, they can legally load them in their computer lab for use by older students. Caution: I'm not a big fan of those "office" programs for children and younger youth because they are not very interesting. --And we need to be attractive.



The "Build a Teacher" screen in the Let's Talk Lesson Builder.

The Variety Within Programs

Almost all the programs listed here have features that are like programs in other categories. Galilee Flyer the game program has a discussion question section. Play and Learn Children's Bible CD has a game room. Good Sam the Samaritan story software has a gameshow built into it. Elijah & Jonah CD animates the story and has games and quizzes all throughout. The teacher must decide which of those elements to use.

One of the most popular "multi-faceted" programs is Discovery Interactive's Life of Christ CD. This program has 40 short slideshow presentations on the life of Christ, each of which ends with a discussion question and quiz. The program also has other areas of content in it to explore which act like a multimedia database. In addition, Life of

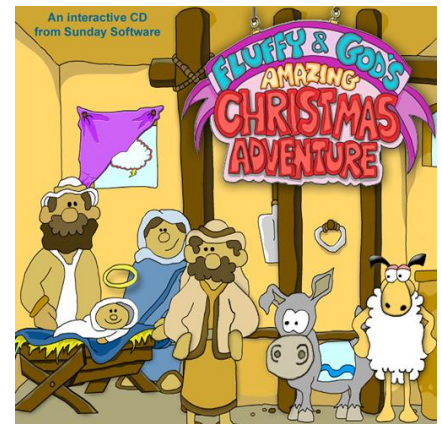
Christ has an **interactive learning game** which can track students as they move through all the Jesus content on the CD and print them certificates of completion.

Sometimes people say they just want “fun game software”, and that’s when I say that **ALL software is something of a “game” to our students**. They want to explore and discover what’s in it. But kids can get excited and try to plow through software. Some programs have a **STRONG** sense of direction, and few options to get off track. Other programs offer many choices to skip content, or stay in a game for as long as they want. Some programs ask questions the kids must get right in order to advance, others pose questions the kids or teachers can choose to skip. Getting student to slow down through content is challenging. Some teachers react by prescribing each step of software use, literally, a piece of paper or a teacher telling the kids when and where to click. Some folks have even suggested that software become more “tutorial.” I understand that need, but also balance it against the results we get when the kids feel in control and the pace is not so prescribed. Left on their own, kids will be kids. **A teacher acting as the “guide by the side” is in the best position to help students slow-down deal with important content, rather than skipping by it.**

A Program Example:

A program like "Fluffy & God’s Amazing Christmas Adventure" CD is designed for two or three years worth of Advent use by a wide age range, without repeating much content in the CD each year (though kids don’t mind repeating content on the computer).

Fluffy’s Christmas story is subdivided into lessons that are similar to those found in Advent curriculum: *The Old Testament hopes for a Messiah, Mary and Joseph and the Angels, the Birth of Jesus, the Story of the Shepherds and Angels, the Magi*. Each lesson area lasts about 20 minutes depending on how well the teacher milks the material. Typically students will do two areas a year. Students can jump anywhere in the program, but once they start into a selected area, the program tries to guide them down a lesson path of successive content and choices. Some content is in the form of animated presentation; some content is playfully interactive. Most of it is narrated, which really helps with the younger kids. Additional text content is tucked-in for teachers point to and discuss, and for older students to dig into if you have the time. Because you will be picking and choosing your way through the program with the kids, *previewing* your software is an essential part of your planning.



The lesson paths through Fluffy’s stories are strewn with questions. Some of them are narrated, some must be read. The questions are there mostly for the “guide by the side” to see and decide whether or not to stop and discuss them with their students. Left unattended, most kids will skip such questions and move forward looking for new interactive elements. If a guide isn’t immediately present, these questions can be written on a handout that the students can fill-in as they follow the material. Or, they can be asked after using the software when back in a discussion group. (Indeed, we have free student handouts for Fluffy at our website) In my written lesson plan for the teachers, I will list out the questions we want to tackle that day and suggest “stop & discuss” points in the program.

The Theological Bent of Recommended Software

Some denominational publishers would like us to believe that only “their” material is suitable for your kids. The truth is that most kid’s curriculum, including software, is fairly traditional and non-denominational. I’m a Presbyterian, so the software I design tends to reflect a tone and vocabulary that most Christians will be comfortable with. Bible versions used in the stories vary depending on the CD, and we often select the version depending on the story itself. As with all curriculums, it’s the teacher’s job to unpack the language and ideas in a way that’s suitable for their kids and church. Our online software guides offer suggestions.

Mistakes Churches Make about Software

Over the years I've encountered churches that let their computer hardware pick their software for them. They brought in vintage computers and discovered that all they can use is vintage software, -which there isn't enough of to cover what they want. The kids are "ok" for a while, but the teacher's job is more difficult, and the techie's job is harder too. Most who have made this mistake wish someone had warned them.

Some churches "settle" for a very limited and rather uninspiring approach to hardware and software. They use a paint program, a Bible CD, and a wordprocessor to run their lab. Their lesson plan begins with study about the Ten Lepers, and ends with the kids making "thank you" cards to Jesus using the wordprocessor. My students would call that "lame."

Another mistake some folks make is to forget who the software is for. Some adults don't like games or "fun" software. They only want to teach with "serious" software. Do not recruit these people.

A few years back a church educator call me up to say she was returning the Life of Paul CD. She said that she previewed it with "the committee" and they didn't think the kids would like it. This was the first Christian software CD they had looked at. I asked, "But did you show it to your kids?" They hadn't. "Have any of you taught with software before?" None of them had. So I mentioned, "That's the CD we're using this month in my *own* lab, I enjoy it and the kids enjoy it." She was non-plussed. So I said, "Sure, send it back, and please don't order anything else, you won't be happy." *Sometimes you need new wineskins for new wine.*

A pastor called one day looking for a newer Bible Atlas "for kids." His church had gotten rid of the lab which the previous pastor had set up. They gave the computers to the church office (I am not kidding). He thought his teachers only needed one computer to project the text of the Bible from a Bible CD onto the wall using an LCD projector and laptop, -to be followed with PowerPoint quiz questions. The teacher gets to have all the fun running the laptop and software, ...and *the kids get to run screaming from the room.*

Teachers who like to be "in control" often make mistakes with software because they aren't sure what to do when the kids aren't looking at them and hanging on their every word, --which they aren't as soon as the software starts up. They can't wait for the software to "get over" so they can get back to the "real" teaching.



Dave the Lab Teacher at Fellowship Reformed Church in Muskegon Michigan sent me this photo of his lab. One of the boys in it had a sleepover Saturday night and brought his friends with him to Sunday School because he didn't want to miss his turn in the Bible Computer Lab.

Chapter 5: Computer Lab Design & Layout

These next two chapters are about Lab Design and Hardware. The subjects are so intertwined that I could have put them in the same chapter. I've set up labs in each of the churches I've served. And in each case, I've set them up using the same principles –because they work. To understand the relationship between hardware and lab design, consider one of my favorite quotes from Shakespeare's King Richard:

“For want of a nail, the shoe was lost; --for want of the shoe, the horse was lost;-- for want of the horse, the rider was lost; --for want of the rider, the battle was lost; --for want of the battle, the kingdom was lost; and all for the want of a nail.”

The “nail” in your lab is your teachers. Without them teaching, the lab is lost.

Design your lab to encourage and maximize what TEACHERS should be doing in the lab –which is going through the software with your kids, *not standing around watching them.*

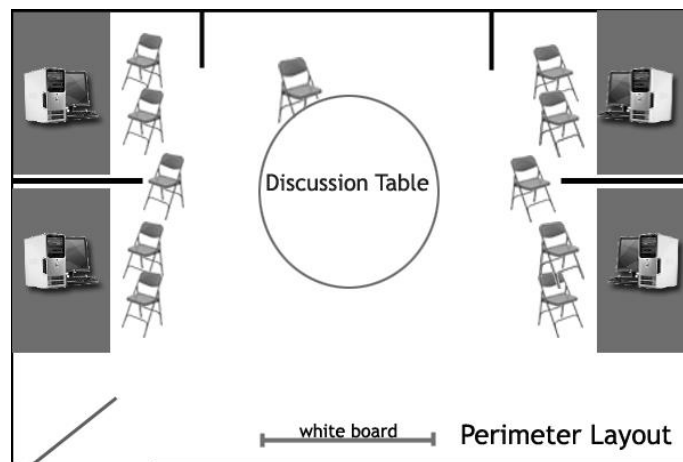
Concept before Construction

It's not uncommon for some churches to get this backwards. They build their lab and THEN read about how to teach with software. If you've made this mistake, keep reading and don't hesitate to make changes.

Concept: Design your Lab with Teaching and Teachers in Mind

- Teachers need to be able to get down next to their students and talk with them. Give them room.
- One Teacher can sit and cover two computers but probably not three.
- Thus...the optimum distance between two computers is about 5 to 6 feet.
- Sound needs to be dampened between computers to allow for discussion. Create dividers.

Make sure you pick a room that's big enough for the number of computers and students you expect to have. A room that is about 14' x 20' is perfect for three to four computers. Place 2 computers against one of the 12 foot walls, and the other two across the room against the other wall. Space the pairs 5 to 6 feet apart and facing inward to the center of the room. This is called a “perimeter” layout and is used by most churches. If the available room is too small for the number of kids and computers you envision, then either get another room, or downsize the number of computers and students. **It is better to get good teaching results on a smaller scale, than to get mediocre results on a large scale.**



Provisionally, five to six feet between computers is about the distance you get when you put each computer in the middle of two standard 6' rectangular classroom tables placed end to end. A rectangular classroom table also nicely accommodates about 3 students per computer. Each student at such a table will *feel* like they are “at” the computer, not hanging off the edge. Sitting off to the side at a small computer cart feels like you’re not in front, not in control and won’t get your turn. A 6’ table also gives you plenty of room for Bibles, notepads, pencils, keyboard and mouse. Put a low divider between the two tables, and tell your teacher to sit at the divider.

Perimeter vs Pod Arrangement of Computers

The “Perimeter Layout” puts your computers at the edge of the room facing inward (as seen in the diagram on the previous page). Most churches find this to be the ideal arrangement, primarily because it allows the center of the room to be used for some other activity or meeting at another time. The perimeter arrangement lets the lead teacher see each workgroup and what’s on their computer screen. In a rectangular room, put the computers on tables along the *short* walls facing the center of the room. This allows the length of the room to stay open and such length puts a healthy distance between opposing computers to help reduce sound and sight competition. It also allows one teacher to teach between two computers. Notice in the drawing that no computers are at “right angles” to each other. If the room isn’t big enough and computers are placed perpendicular to each other, you’ll have sound problems. In a small room even the two sets of facing computers will compete with one another.



Pictured above right: The lab teacher at Trinity Episcopal in Arlington Virginia in a perimeter setup. She’s at the right spot with her four students. Notice the divider and the all important cup of coffee. Nice job Carol!

The “Pod” Option is the traditional arrangement you see in most public schools. Computers are arranged in a clump, back-to-back on one or more tables. This arrangement works well IF you have extra teachers and don’t need to use the room for anything else. But it’s hard if you only have one teacher, and they can’t see what some of the other workgroups are doing. The attraction of the POD is that reduces some sound competition and you can fit more computers on one table because they are facing opposite directions. Some POD labs put up short dividers between the computers to keep sound from spraying between computers. Sound can still be a problem, however, if your POD is in a small room and the computer speakers are aimed outward at hard walls that are too close behind the students. The biggest drawback to the POD is that it kills your floor space. And in many churches, the computer lab is used for purposes other than computing.



Pictured Above Right: A typical POD arrangement from Congregational UCC in Humboldt Iowa. This is a very nice lab with great décor. But notice the teacher must stand and walk around to work with both computers.

“Acoustic Counter Measures”

Most Sunday School rooms have acoustic problems because they are built like bomb shelters. In a traditional classroom, the teacher is the main source of sound, and everyone must talk one at a time to be heard. In the computer lab, however, each computer and each workgroup is going to be putting out volume most of the time *at the same time*. Your first line of defense is a good layout. **Volume diminishes over distance.** Use the perimeter

layout and put your computers on the two parallel walls farthest away from each other. Do not put computers on all four walls or on three walls because computers at right angles will overlap.

If your ceiling and walls are made out of hard materials and the room is small, sound will reflect around the room creating cacophony. You can't get rid of sound; you want to "dampen" it between groups and computers. A few well-placed dividers and furniture pieces can help deflect and dampen sound coming across the room. The BEST way to control sound is at the source. I regularly remind my students to control speaker volume and pull the speakers close to them, rather than keeping them back by the monitors.

Figuring out how to dampen volume in the lab is a matter of trial and error. Once you dampen the relative volumes between the computers, the learners' ears take over from there. Our ears naturally focus on nearby sound sources, and tune-out the volume from more distant sources. Thus, it is important to determine your lab's acoustic problems while sitting at a computer, not by standing in the middle of the room. If you are standing in the middle of the room, all the volumes will sound the same.

Acoustic Counter-Measures:

- Pick a large room and put your computers at the opposite ends of the room.
- Lay carpeting or rugs.
- Space computers along a wall about 5 to 6 feet apart.
- Put dividers between computers. More about this great idea on the next page...
- Buy good speakers that sound good at low volume. Cheap speakers often don't.
- Make sure your speakers have volume controls. Some don't.
- Aim the speakers "in" toward the workgroup (sound tends to spray).
- Add cable extensions if needed so you can pull the speakers up close to the kids. Their bodies will do a great job of reducing sound spray between computers.
- Avoid putting computers in corners, or in locations where a structure may actually amplify the sound (such as under a low overhang or corner).
- Place heavy cloth on your computer tables (it will look nice too).
- Soften the ceiling by hanging banners and mobiles or installing ceiling tiles.
- Use curtains instead of blinds.
- Put plastic ficus trees in the corners to break up sound reflection (and improve décor).
- Put up cork bulletin boards on opposing walls.

Low dividers

One of the best things you can do is erect low moveable dividers between your computers. They are great at blocking sound spray between computers. Tack some foam and fabric to a piece plywood or wood frame and slip it between the ends of your tables.

In my lab, (seen at right) we were given an office-grade folding panel covered in fabric. We broke it into sections and placed one section in between each pair of computers. It's high enough so the kids can't see over to the next computer, but low enough for the teacher to work with both computers. I slide the divider out about 12 inches and sit right at the divider to work with both groups. The wall behind is covered with cork squares.

Sometimes I pull the remaining sections of the divider (not seen in this photo) in BEHIND the kids when the software gets exceptionally musical or loud. Programs do vary in their sound use and intensity.

A discussion area in the middle of the room will help to break up sound trying to travel across it. Lots of irregular angles, such as those produced by chairs, couches and tables, will also deflect & dampen sound.



Avoid placing computers near surfaces, objects and locations in the room which actually amplify sound. A few months ago I was in a small lab that had one of their computers sitting underneath an enclosed stairwell. The slanted ceiling acted like a megaphone into the rest of the room.

Get Thee Behind Me Headphones

You might be thinking, “why not put headphones on the kids?” I want to **STRONGLY** suggest that this is your last option. Why? Have you ever tried teaching a lesson to kids who can’t hear you? Headphones cut off teacher-to-student interaction, and student-to-student interaction. If you’re not convinced, try teaching a lesson next Sunday where the kids aren’t looking at you and can’t hear you. If you’re still not convinced, go online at sundaysoftware.com and read my diatribe titled, “***Get Thee Behind Me Headphones!***”



Pictured: A teacher standing doing nothing. Kids separated from each other wearing headphones. This may be OK for teaching math skills, but it’s not OK for sharing and discussing the Gospel.

I’m sure that some labs where kids wear headphones “get by” and a few might even do well. But after two decades of teaching with software I know **it is WRONG for me and for most churches**. I believe the **BEST** lab is one in which students and teachers go through the software together, -talking, sharing, pointing, stopping to discuss, and laughing together at the same funny things. When you put headphones on a kid, you lose too much of what teaching and sharing is all about. And without a teacher to pace them, kids will blow through software. Headphones are an expedient solution to a problem that can be solved in other ways.



Pictured: An example of a discussion area near the tented computers at First Presbyterian, Richardson Texas

Lab Furniture and Other Room Décor

The big focus in the lab, of course, is what's on the screen. But that doesn't stop churches from getting creative in their lab space. Most labs decorate their rooms with a theme in mind. One of the most popular is a forest or jungle theme. Watch for sales of those plastic plants and trees at the local discount store. "Theme" decorations can be found online at websites such as orientaltradingcompany.com. A well-designed and inviting learning space tells everyone you care.

Some churches purchase rolling chairs for their computer stations, but most find that folding chairs work well. You'll need a full complement of traditional teaching supplies, including Bibles, pencils, and paper. A large dry-erase whiteboard or pad of paper on a tripod will come in handy. I recommend "dry-erase" boards over chalkboards for two reasons. **Chalk creates dust which will cling to your screens** and coat the inside of your computers. And chalk dust bothers many with allergies. Airborne chalk can create a sense of dis-ease among your allergen sensitive teachers and students. (I learned this after I developed dust allergies.)

If you're putting your computers on classroom tables, go to the fabric store and purchase thick vinyl tablecloth material with a flannel back. You can get it in a variety of colors and it will dress up the tables nicely. And now the entire tabletop becomes your mousepad. Do not use lightweight table cloth material. It tends to bunch up underneath the equipment, and doesn't give you a flat enough surface to run your mouse.

Recycled CDs make wonderful room decorations. They can be hung on push pins to create Christian symbols, glued around bulletin boards, or used to spell out the name of your lab or a special verse.

Shiny CDs make neat mobiles and can also be hooked together to form curtains. Check with your local computer store or software replication business for CD's they might be throwing away.



Spirit of Hope in Golden Valley Minnesota was the first lab I ever saw doing something special with spare CDs. Can you see what they spell out?

Naming Your Computer Lab

Prior to my current church, we always called our lab the "Bible Computer Lab," but in the church where I serve now, we call it the "**Bible Surf Shack**" and gave it a beach theme. Beach stuff is cheap and easy to find, and the kids love it. Most churches come up with creative names that are tied to an overall Sunday School design or theme.

I have collected over 100 creative lab names and listed them at our website (look in the articles section of www.sundaysoftware.com).

Here are a few of my favorite computer lab names...

Bible Surf Shack, The Mouse Trap, SonScreen, The Disciple's Digital Den, The Mouse's Pad, Mouse House, The Disc Drive-In, Fish & Chips, Bug Bytes, Fish Bytes. Behind each of these names is a lot of fun décor.

The lab name “*Circuit Riders*” is used by several United Methodist churches. In my own **Presbyterian** denomination, we could go with “*God's Frozen Computers,*” or, “*This System has Performed an Illegal Operation,*” and “*Warning, Your System is Currently Unstable,*” or, “*The Presbyterian Blue Screen of Death.*”



The cool entrance to the “Bibleland.com” Lab at St. Olaf’s in Hayfield Minnesota

View more computer lab photos at www.sundaysoftware.com/photos

Chapter 6: Computer Lab Hardware

Some of you have been thumbing through this book to find this section. For you “techies” I have two suggestions.... **First**, read my latest hardware recommendations at www.sundaysoftware.com. And **second**, read everything in this book before you go get hardware. **Hardware is one of your last important decisions.**

How long will your computers last you?

A modest new computer purchased today should last about 8 years in your lab. This is **longer** than the average life expectancy of an office computer. Why? Christian CDs are not blowing the top off of system requirements, and CE hardware typically doesn't get heavy use. If you buy a new computer today for Christian education use, and every year add a few more software titles to your library, then technically speaking, that computer and software could last you forever, as long as neither gets damaged.

Here in 2016, you can easily begin with **used computers** that are five or six years old. There is A LOT of great Bible software for kids that was designed for older systems and is still around. See more details about “minimums” below.

Good CE software has a long life expectancy, -much longer than office or secular gaming software. I am still using Good Sam the Samaritan, Noah and the Ark, and Life of Christ CDs more than ten years after they were made. Not all programs “age” that well, but many do. Kids enjoy repeating software they like, especially if they haven't used it in a while. And we are not competing against today's video games in Sunday School.



Where to get Hardware

Many people are surprised how easy it is to get good used computer hardware for free. This wasn't true in the 1990's, but nowadays, businesses and families turn over their equipment a lot more frequently. Some of the computer geeks in the congregation can be great sources of good used equipment. As they talk to their fellow techies at work or in the neighborhood, they'll likely be able to find some decent hardware for you. Word to the wise on donations: Decide on a minimum you will accept, and don't take anything below it.

The Minimum for Used Computers to be Used in Sunday School

The following minimum is for 2017 and based on my experience, will likely be good through at least 2020. Accept used computers Windows 7 or higher. **1.7ghz or higher** processing power, 2 gb of ram memory, and 64 mb *or more* of videoram. This is a VERY MODEST computer by today's standard, but accepting anything less could set you up for technical problems, and cut you out of some good currently available software, and good titles likely to come out within the next few years. (This minimum is for Sunday School use.)

As mentioned elsewhere in this book, it's the software you teach with. The hardware should be your servant, not your master. More than a few churches have said that their biggest mistake was trying to get started with *antiquated* equipment. More than a few churches have also been blessed with better equipment than they expected.

If these numbers are confusing to you, ask for help. You probably have more technically literate people in your congregation than biblically literate.

“Hardware Hopes”

Practice discernment. Church volunteers and leaders have been conditioned to accept ANY gift and try to “make do.” However, this approach to computer hardware rarely works. Do not let your Bible computer lab become

a dumping ground for members' alleged generosity. They are doing you no favor by giving you a machine that will waste your teachers' time, your techie's time, and your time.

Be careful of "techie promises." More than one church leader has lamented the unkept promises made by a well-meaning member who said they could "upgrade your old equipment" for you.

If you are the techie reading this, do your church a favor and **tell them the truth** about the pile of hardware they expect you to work miracles with. They need you to invest your time getting good hardware set up and the software installed. Don't burn your enthusiasm and time.

Have hope, and do not sell short your congregation's ability to respond with what you really need. I hear from churches all the time that refuse the first wave of cast-off hardware, only to be blessed later on with good used machines, or even new ones. There are people in your church who understand why you need a certain level of computer. They understand the attraction of software to children because they too are attracted to this medium. They aren't interested in helping you find more puppets or construction paper. But they "get it" when you talk about computers. I know... that's sounds like a pitch. But it happens all the time.

If I were buying new computers...

If you're looking for new computers, go to Dell's website and look at their basic entry-level "value" model desktop running Windows, **and then buy the one that's one step above basic.** Such a computer is way ahead of where Christian software is right now, will last you many years, and can be upgraded in 5 or 6 years from now to add a few more years of life expectancy. You don't have to buy a Dell. I'm merely using them as an example of this "one step above entry level" to guide your purchase.

You don't need a giant hard drive. Instead, invest your limited funds in a bigger monitor. A 20" flat screen is a good size for 2 or 3 kids and a teacher.

Windows

As I write this, almost every program I teach with works on Windows XP, Windows 7, Windows 8, AND Windows 10. Be cautious about older equipment that hasn't had a Windows upgrade applied to it. In some cases, you do not want to update the operating system on an older computer, because it's video chips and drivers will not be compatible with the new system, and will not have updates available themselves.

iPads and Tablets?

To date, most Christian software is designed to run on conventional operating systems, not on a pad. In the future, this will undoubtedly change, but for now, *no*. Pads are also more of a "single-user" concept of use, i.e., not well-suited to the cooperative learning model we value in Sunday School and fellowship group.

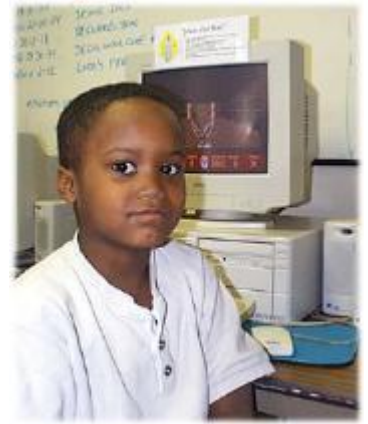
Apple-Mac versus Windows

Apple builds good computers and a great operating system. But because *too many* Christian software titles are Windows only -we strongly recommend NOT USING MACs. The feedback from our Mac customers is generally along the lines of... "We feel trapped." They see good new Christian software coming out but can't run it because the person setting up their lab (or paying for it) insisted on putting in Macs. The issue isn't about which system is better, it's simply about "the way it is," and having access to the widest possible selection of Christian software to choose from. **We strongly recommend you go with Windows PCs.**

Internet Access

In the 2001 version of this book, I did not recommend hooking up your Christian education computer lab to the internet. ***But today, most copies of Windows expect an internet connection and will need one to register or update.*** So, it is a VERY good idea to be able to connect those computers to the internet from time to time, if not permanently, to keep them updated. You could tap into the church office internet connection once a year (or when you need to do maintenance) using a wireless modem or long cable you hook up for special occasions. It depends on where your internet connection is in your building.

New labs should consider installing a “wireless” network for internet access, file and printer sharing between your computers. A few years ago I was not suggesting “wireless.” But improved signal strength and wireless speeds are such now that they make a lot of sense in a lab with more than 3 computers. A small network will allow you to invest in one nice printer, rather than several cheapies. A wireless system may also allow you to tap into the church office’s internet connection without running cables through ceilings. Talk to your techies about this.



What about Using the Internet in a Lesson?

I am still of the opinion that there isn’t enough good Christian content on the web to begin surfing there with our kids on Sunday morning. Most Christian websites are not kid-friendly (most are boring). Some have cheesy activities, poor content, or political and theological axes to grind. Pretty disappointing actually. Perhaps this will change in the near future (but each time I update this section, it never has!)

Occasionally someone gets excited about the fact that they are “using the internet” in their lessons. But when they actually tell me what they did and where they went, I usually wince. Their “use” usually involves reading text-heavy webpages (kids love that), or searching for Bible graphics (how fun) or finding the occasional poorly made Bible quiz. There are a few sites which have short flash presentations for Christian kids (a handful). Some people have put up Bible story pages using some gnarly looking (cheap) graphics.

Those ideas which show promise are usually related to mission projects. Some mission agencies have webpages with photos. Some churches will have their kids email missionaries. A few churches have their kids play “where in the world is _____ mission” using Google Earth. These are interesting occasional lesson ideas. Be careful not to mistake time spent “surfing” with time spent “learning.”

Networking

If you have more than four or five computers, you might want to consider networking them together for the purposes of sharing files and a printer. For example, you may want to copy question sets and graphics between computers. It can also allow you to perform maintenance from one machine to all the others. Computers can be directly linked to each other, or you can use the same “router” used to access the internet to link the computers. Consider a wireless network.

Please note: The networking talked about here does not allow you to run multimedia software installed on one computer across multiple computer stations. Most Christian software is licensed for installation and use on one computer at a time, regardless of the existence of a network or not. It’s not right to teach with illegally distributed software.

Networking to share printers can also be a good idea under certain circumstances. Read on...

Printers

Some labs use their printers a lot. Some use them rarely. I rarely use mine. The reason for this wide divergence has to do with the type of lesson activities your teachers prefer, the software you have available to use, software

budgets, and the age of your students. If you're not going to use your printers very often, consider getting inexpensive laser printers. Inkjets tend to dry out or get clogged with limited use.

Some newer programs have things in them which you can print and use during the lesson. Others, such as Life of Christ CD, have certificates which can be printed to mark achievement of new levels of learning. In some cases, I print out what we need ahead of time, making copies for everyone. That way we aren't wasting time during class printing documents. If you will be making use of the internet, you'll likely want to print many things.

Some teachers like to have their students type and print documents as part of the lesson plan. They have the kids create cards and newsletters about the story. Typically, you find this strategy in labs which have older equipment and very little Bible story software to use. When you have a poor software budget, that word processor starts to look pretty good to you. Kids do like to type, but creating "a newsletter page about our Bible story" will get old fast.

Kid Pix, the creative writing and drawing program is one big reason why some labs use their printers a lot. They like to print-out what the kids create. If you plan on making heavy use of that program, having color inkjet printers is a good idea. Having plenty of color inkjet cartridges is an even BETTER idea! We use Kid Pix in my lab about once every 4 or 5 months and rarely have the kids print out their projects. Younger children like to print out their projects, whereas, older children are less likely to.

Consider networking to share a printer if you are *infrequently* going to use printers in your lab, or if your computers are already networked together to share an internet connection. You'll want a fast color printer, otherwise you'll be killing time waiting for copies of all the kids' projects to print. Another reason to share one printer is that inkjet cartridges dry out and inkjet printing heads get clogged when not used for a prolonged period. Better to have one printer that needs a quick adjustment than several!

Monitors

The larger the monitor the better. This is especially true given that you'll have 2 to 3 kids per computer monitor, plus a teacher looking on. A 17" monitor should be considered a minimum. Used monitors need to be looked at carefully. After about 6 or 7 years, a monitor can begin to lose clarity and color quality. If you are piecing together a lab out of used equipment, you should probably not spend good money on new monitors for computers that are older than about five years old. Conversely, you should not put monitors older than 5 years old on new or newer equipment. Graphic standards have changed. The match doesn't always go well.

Mice, and Speakers

If you are going to use large classroom tables, get an "optical" mouse for each computer, instead of the older rollerball type. Here's why... With an optical mouse, your entire table top can be the mousepad. This will come in handy when moving the mouse between students to the left or right keyboard. Younger kids tend to run off a mousepad. And because your optical mouse doesn't need a pad, there's no pad for them to run off of. If your donated equipment came with rollerball type mice, replace them.

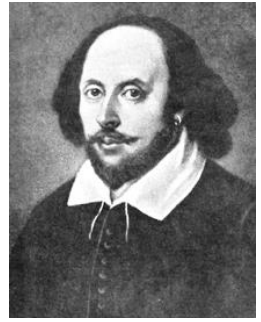
Buy a good set of stereo speakers. You want speakers that sound good at low volume so that your students won't be inclined to turn them up. Make sure the speakers have their own power supply and easy to access volume controls **on the speaker itself**. **Onscreen volume controls, such as those on laptops**, are often *inaccessible* when you're running software. And some programs don't like you pressing keys during their operation. Another tip: If your speakers come with rather short cords, buy extension speaker cables so that you can pull the speakers right up to the kids at the edge of the table. Do not sit your speaker back behind the monitor because then you'll have to turn up their volume.

☞ If you will be using laptops, get each of them a set of separate amplified speakers as well. Many laptops have low or poor quality sound which won't hold up in a noisy room.

Wireless mice and keyboards are not recommended for two reasons. One, they can easily walk off. And two, they require batteries which can go dead.

Shakespeare will now summarize this book so far...

**For want of a good set up, the teachers were lost,
for want of a good computer the good software was lost;
for want of good software and teachers the good lessons were lost;
for want of good lessons the good students were lost;
for want of good students the Kingdom was lost.**



Sunday Software's Jesus in Space CD is a great example of why I like what I do. One of my favorite educational activities, software or no software, is to help kids think about how to make sense of Bible stories in a way that's understandable, fresh and memorable. (It's that Pentecost story once again!) So how WOULD you tell the story of the Last Supper and Foot Washing to a planet full of robots? How do you explain Baptism to creatures who live underwater on the Planet Vet? And what would John the Baptist wear underwater? In Jesus in Space, your students have to figure these things out, and more.

Chapter 7: The Computer Lab Teacher

At this point in the book I've already tossed out a bunch of ideas for teachers, and what it's like teaching with Christian software. This chapter concentrates that message and offers some material you are welcome to put on the church copier and discuss with your teachers. Please!

Remember what Shakespeare said earlier in this book? That "one thing," you need most, that "nail" which ensures the Kingdom, is most likely one really good teacher who wants to teach with software.

--Someone who do the reading, preview the software, create a lesson plan, and knows how to manage students toward a lesson objective. Now I know how important that would be for EVERY class, regardless of the medium. But let me suggest it is even MORE important when organizing a Bible computer lab. You can make it up as you go with craft supplies. You can come up with dialog on the fly for a skit, but if you walk into a computer lab unprepared, you are sunk. If you send your students into software and have no clue where they are going or where they shouldn't go, you have created an expensive waste of time which the kids will still think is "neat." Find the right person to head up your lab, and you are halfway home.

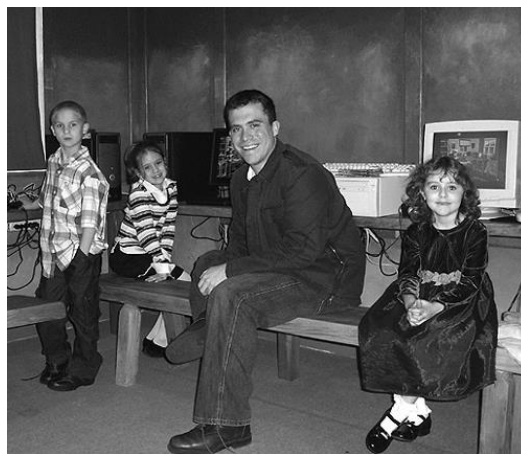


Who might this person be?

Odds are your best computer lab teachers won't be computer techies. Your best lab teachers and assistants will be those who have a desire to teach kids. And yet one of the common mistakes new labs make is they recruit the church techies to be the leaders of their lab. They do this from the false assumption that the lab is more about hardware and software, than about teaching.

If your techies CAN teach, that's great. But give me a computer novice any day who knows the value of a lesson plan -over a computer wiz who can build computers in the dark. It's a lot easier to train a teacher how to work with software than it is to train a techie how to teach.

This means some of your best potential computer lab teachers will be in hiding when you open your lab! Why? Because many will mistakenly think the lab requires techies. Or, they fear computers will eliminate the need for them to teach. They think that with the computers turned on, there won't be a place for them in the lab. So very early on, you want to find this one good *teacher* to run your lab, and have them be the one who trains your other teachers and assistants.



This is a happy teacher (with happy students) at Wesley UMC, Sulphur Springs Texas

Recruiting Tips

Where can you find them? Why not start with yourself! If you're reading this, you're probably a teacher (the techies will have skipped straight to the hardware section). Start pulling in some likely suspects to help you teach the first couple of weeks or months with you in the lab. Some of my favorite lab teachers over the years got their start assisting me in the lab. I particularly took notice of the Dads who lingered enthusiastically in our lab before and after a lesson. Many will go right over to survey the software and sit down with their child who is happy to review the software they used that day. If they came up to me and started talking "equipment" I didn't immediately assume they couldn't teach, but it made me wonder. Most adults who show an interest in your lab will say "yes" when asked to "be an assistant." After apprenticing them, some will become good Lead Teachers. Others will become enthusiastic and dependable lab assistants.

Senior members of your congregation may be a surprising source of help for your lab. Quite a few labs I've helped were started by retired volunteers who happen to like computers and had a passion for Christian education. Many were motivated to revitalize the program. Some of your potential "elder recruits" have done long stints of teaching in their earlier years. They will express doubts about their ability to handle "kids today." Yet when invited to observe they will appreciate how well-behaved the kids are around the computer.

Your collection of equipment WILL attract geeks. And some of them may be the teachers you have long hoped would materialize in your program. They just haven't been interested up til now in your teaching methods. This is especially true of some men. They aren't interested in craft-driven lessons. But because you have computers –and because they like computers, they'll help you out.

Senior High School students are another good source for lab assistants. Occasionally, they even make excellent Lead Teachers. Years ago in one church we called them "Bible Lab Buddies" and recruited them from the ranks of teens who did not feel comfortable bearing their soul in class to their peers, or weren't attending much at all. Some churches make the mistake of not recruiting Senior Highs to teach because they believe all of them should be in a class of their own. Our computer lab, however, actually became a "ministry" to teens who were not participating, or felt uncomfortable doing so.

Training Lead Teachers and Teaching Assistants for the Lab

The best way to train a teacher is to have them come teach with you. It's especially important considering most volunteers have no previous experience teaching with software. Find that one person who is a good teacher and loves a challenge. They need to be the kind of teacher who loves to talk with kids ("with" kids, not "at" kids), isn't afraid of computers, will do the extra reading, and will prepare with the software. Then, have that lab teacher apprentice several other volunteers with "on the job training." The Mentor-Apprentice training model is the best there is.

In most labs, you'll need a Lead Teacher for each lesson, plus one or more teaching assistants to help with the other computers (if you have more than two). Remember the important teacher-to-computer ratio of 1 teacher for every 2 computers. That level of coverage is essential to quality lesson time at the computer.

Getting the teaching situation right is one of your best recruiting tools. When the teaching experience feels right, teachers come back and teach again.

Finding the right people is critical. It's the one thing established labs mention as the reason for their success (or lack thereof).

Mitch Phillips, the Lutheran pastor quoted earlier in this book, wrote this observation based on his 10 years of experience with computer labs:



I think that the biggest challenge - beyond equipment, space, and technical issues - is equipping people to teach with software in such a way that the software is truly an instructional resource - part of the journey and not the destination. Some people are so awed or impressed by the “gee whiz” factor of using computers that they just sit the kids in front of the computer, run through the software, and never really make that leap to where real learning happens, where children are connecting the Biblical world to their world, the Biblical story to their story.

Folks who effectively teach with computers know that the software is only part of the lesson plan and that you have to engage the children in dialogue and discussion to make the connections between the Bible story, how they are encountering that story via the software, and their own lives.

Linda Lowery of Faith Church in Elgin Illinois began her first lab in 1996 and wrote this in 2006:

A challenge for us is getting the right ratio of adults per children in the (lab) classroom. Some churches have the idea that teaching with computers does not need as many adults in the classroom because the computer is doing the teaching. We find that it is just the opposite.

★ Neil's #1 Training & Lesson Secret ★

Often in a volunteer-based program, your lab assistants come unprepared. In the best of all possible worlds, everyone would be as prepared as the Lead Teacher. But that's not the reality in most churches. This is why I've found this *next* training practice incredibly important for the success of my apprentices and assistants.

At the beginning of the lesson time, I sketch out the lesson plan on a large whiteboard for everyone to see, including my assistants. I write down the scripture verses (or chapter and verse). I write down questions we want to discuss. I write down what I hope they will learn that day. Then I quickly sketch out notes about today's software, -what sections to go into, what to do, and how long to stay. Not only is this good for the students, but it brings the lab assistants up to speed immediately. It will give your assistants something to refer to throughout the lesson. Indeed, you'll see them glancing at the whiteboard throughout the lesson. And here's the bonus: **the kids look too.** They want to know where, when, and how much. Writing out the lesson plan for all to see helps everyone know where the class is headed. It reduces the anxiety of the students AND the teachers.

Neil's #2 “Training Secret” is to keep the same lab assistants for more than one week. Most of us with computer labs rotate new kids into the lab, but don't change the teachers. We let our Lead Teacher and lab assistants *get better by experience*. Most people with even modest teaching gifts will instinctually try to improve their lesson as they teach them, and in the following week if they are given the opportunity to do it over. By changing the students, but sticking with the same software and lesson plan (with age appropriate adjustments), you teachers will be able to experiment with what works. It builds their confidence and their comfort level goes way up. They'll know what to expect. They will hone their commentary. And they'll have a much better grasp of the software. At the end of each lesson and prior to the next, we'll share notes about what we could have done differently. And at the beginning of each lesson I still do my “lesson sketch,” but with each successive week it becomes more of a reminder than preparation.

Other On-the-Job Training Tips

The traditional approach to teacher training is to hand out articles, and I recommend that too. But without a doubt, **experience is the best teacher**. That's why I recommend apprenticing teachers with Lead Teachers, but also designing our lab schedule so that teachers get to repeat their lessons and make them better.

By changing the kids each week, instead of changing the software or teachers, it allows your teachers prepare once, and improve their lesson plan each week based on actual classroom experience. This approach is called "rotational" and is particularly awesome for computer labs.

Here are some other things you can do to improve the quality of teaching and learning in your lab:

Create a discussion area away from the computers where you can sketch out the lesson on your whiteboard and do additional lesson activities. Make it an interesting space. This is where I'll pile the Bibles, pens and paper. In my lab are a couple of buckets full of props and cloth. We use these for tabletop dramas and quickie skits. For Daniel and the Lion's Den, for example, I positioned the discussion tables so that they made an opening in the middle. Around the inside of that opening I draped a large cloth to create a den. I took several stuffed animals and put them on the table. These became the lions which would soon be placed in the den. It didn't need to be elaborate because frankly, the kids were going to be quite happy when they got on the computers. But the props helped stoke the discussion after the software about "scary places God will help you through." The props and discussion area are constant reminders that software is a *component* in a lesson plan, not a replacement for one. It's sends a signal and sets expectations with the kids too about what we do in the lab.

Post "Discussion Helps" around the lab that give teachers helpful hints. For example, create a list of 8 to 10 discussion starting questions and make them part of your lab décor so that teachers can draw from them as needed. Examples: "If I were Jesus, I would have said..." "What do you think this story/verse is telling us to do and not do?" "Why is that person acting like that?" "How do you think this story is going to end?" "Has anything like that ever happened to you?"

Post "Lesson Plan Helps" on your walls, or create reusable magnets to go on your whiteboard that read, "Today we will learn..." and "Questions for the day..." Post a "Ten Commandments" of Computer Lab Behavior. One can be found in the articles section of www.sundaysoftware.com. A simple commandment, such as, "Don't be a mouse hog" not only reminds students, it cues teachers what to be on the look-out for.

What is the Role of the Teacher in the Computer Lab?

The answer to this question may seem obvious to you, but it may not be obvious to your volunteers. Computer lab teachers and assistants function like teachers in most other teaching situations. They **introduce content, supply additional information, ask questions, conduct activities, reflect on meaning, and pay attention to student needs**. But as is often the case, the people first recruited to run the lab have more technical experience than teaching. So it is best not to over-estimate what our volunteers know about teaching.

I was reminded of this "over-estimation" problem during a training seminar one day in Houston. I kept referring to "*creating and using a lesson plan with the software*," when one of the men in the back of the room raised his hand and said, "*can you tell us exactly WHAT IS a lesson plan?*" He was a "techie dad" who had never before taught Sunday School, but had been recruited to lead his church's computer lab.



Even experienced teachers can make wrong assumptions about their role in the lab. Some will see the computers and think they don't have to do much teaching. Or they will feel like they are intruding in the software if they stop to share and ask questions. Then there is the problem created when there is no Lead Teacher, only the regular classroom teacher who brings their students into the lab "every so often." The "visiting" teachers begin to view the computer lab as "a break from real teaching." They'll be happy just to make the kids happy, and won't spend time preparing with the software. This phenomenon has been the downfall of many computer labs, and is the main reason why we strongly recommend the recruitment of Lead Teachers for the lab who will be there week in and week out.

Guide, Model, Share, and Pastor

I have come up with a short, pithy poster to remind my teachers "how" they should teach.

Adults Guide –they help students navigate the software, and guide them to discover meaning.

Adults Model –they embody enthusiasm for God's Word and demonstrate through their words and actions as we explore our lessons how we are to treat one another.

Adults Share –they offer up their own faithful reflections and experiences, and encourage their students to do the same.

Adults Pastor –they pay attention to the moods, emotional needs, developmental needs, and spiritual needs of their students.

Before I get off this point, let me reiterate. Many volunteers do NOT know everything they need to know about teaching a Sunday School class. Many are simply good at saying "yes" and following instructions. And teaching with software can feel a bit free-form. So we need to help them with structure. One of the great things about rotating different classes into your lab, but keeping the same Lead Teacher and lab assistant, is that by the second week of the "rotation" the teachers know the lesson plan and don't need a copy of it in their hand. And they're not fumbling through the software. In many ways, the first week in the lab with a new lesson and CD is on-the-job training. By the second week they are better prepared for the nuts and bolts of the lesson, and are free to do more guiding, modeling, sharing and pastoring. It's a wonderful way to teach.

Teaching Elbow-to-Elbow in the Computer Lab

Mark this down as another one of "Neil's most important computer lab secrets." While at the computer, **sit elbow-to-elbow with your students.** I'm constantly reminded in my own teaching, how much better it is to teach with software when I'm elbow to elbow with my students. Standing or wandering between computers takes you away from content and teachable moments. It turns teachers into supervisors. "Newbie" teachers tend to make the mistake of wandering the lab. They aren't sure where and how to engage the students while the software is running. Their initial impulse is to just stand, watch and wait for it to be over. They'll hover behind their students if there is no chair, and then slowly disengage as they get tired of hovering. Computer techies who get recruited to be teachers tend to make this same mistake. Show them *where* to teach!

This "where to teach" advice seems rather obvious and intuitive to teachers, which makes it all the more surprising when it is not followed. Many of the photos that customers send me feature a smiling teacher standing in the middle of a crowded lab, with no empty chair or space for the teacher to sit down at the computers. Recently I received a photo from a long-time customer that showed two teachers in her lab. One teacher was standing about 2 feet behind two girls at a computer, -the teacher visibly straining to see what was on the screen. The other teacher was seated next to a boy at another computer -pointing to something on the screen and



talking about it. I noticed there wasn't an extra chair for the standing teacher. Which students do you think were getting the better lesson? Which teacher felt more satisfied about their contribution to the lesson?

One of the reasons you must get elbow-to-elbow with at the computer is to be able to **read the non-verbal signals** from your students. Teachers depend on the eyes and body language of their students to adjust pace, time comments, ask questions, and get a sense of how well they are grasping content. This is especially true at the computer where eye gaze is intensely following content on the screen, and bodies go into a "hold still" mode. Imagine sitting in a circle trying to teach a traditional Bible study with all your students turned away from you. Wouldn't work there, and doesn't work in the computer lab.

Another reason to go elbow-to-elbow with your students at the computer is to become part of their learning experience. Remember the four words that define a teacher? They are **Guide, Model, Share, and Pastor**. You can't do any of these things well from the center of the room. Young people especially respond to close proximity teaching. There's something qualitatively different between sharing a lesson at the computer, and being 8 feet away. This is one of the things that separates Christian Education from Public Education, especially when it comes to using computers. We place a high value on the *shared* experience of learning *together*. In fact, some would say the Gospel can't be properly taught any other way. It's personal, and it's person to person. Though we're bringing computers in to help us, our use of them should reflect our values, not interfere with them.

Yet another benefit of teaching with computers is that it puts students in close proximity to each other. Fifth grade boys who won't sit next to a girl at the table, will sit between two girls at a computer screen. What's on the screen is so interesting to them that they forget about "cooties" and personal space issues for a while. You will also notice that quiet kids who clam up in group situations are more at ease at the computer.



Having said all this about being right at the computer, there are times when I step back and let each computer group work rather independently for a time. Usually this happens when they have been given an assignment, such as, "unscramble the verses in Cal & Marty's Scripture Memory Game" or "create a new version of Psalm 23 using Let's Talk CD." During such "creative" times I'll drop in with comments and suggestions as they are working.

Some workgroups need a little more supervision and help than others. It really depends on the software they are using, and what they are doing with that software. Some parts of certain programs are made better by the teacher's presence. For example, when using Cal and Marty to unscramble a memory verse, it's a good idea to be present when they finish the verse so you can read "the comment about the verse" with them. Of course, just being there doesn't guarantee the teacher will engage.

When I lead, I also have to be aware of how my other teachers are doing. Some adults aren't sure what to do or say when they aren't in control of the moment. If you under-staff your lab, it's easy to fall into a pattern of NOT being elbow-to-elbow. And with many programs, that means not using them as well as you could. So watch those teacher-student-computer ratios!

☞ **2 to 3 kids per computer and 2 computers per teacher promotes small group learning & relationships**

Lead Teachers, Teachers & Lab Assistants

I'd like to take a moment to parse out the three types of "volunteers" I've been mentioning in the lab: Lead teachers, Teachers, and Assistants. These are not strict roles. Rather, they are examples of the kinds of volunteer roles that computer labs have found helpful.

Lead Teachers: In the average church, you might have two Lead Teachers for your Bible computer lab who divvy up the schedule—each taking a month or semester at a time. These Lead Teachers have read this book, and the Teaching Tips for the software you have purchased. The Lead Teacher is the person who has spent the most time previewing the software. In many cases, they even write the lesson plans. The Lead Teacher is often the one who installs the software, and sometimes is part of the team which oversees the hardware. More often than not, they run the lesson plan when the kids are in the lab.

The "**Teacher**" might be the Lead Teacher, but they also might be the teacher who comes with the class and helps the Lead Teacher. In that case, they might not do the same amount of preparation and may not have seen the software prior to coming in. They talk with the Lead Teacher about the software they want to use, or request lab time for lessons/software they want help with. They follow the Lead Teacher's "lead" during class time, and are often responsible for teaching the part of the lesson that's away from the computers.

Lab Assistant's are my favorite bunch. They often start out as visitors to the lab who show an interest in what we're doing and "get invited to stay" that day, or help out next week. Sometimes the lab assistant arrives as a "helper" with the class that is scheduled into the lab that day. Sometimes they are a teenager seen wandering the halls, or who has expressed an interest in helping you with the computers. Lab assistants can be an older person from the congregation, or the pastor who happens to drop by. Many times over the years, my lab assistant has been one of my daughters. The Lab Assistant's preparation usually consists of "listening closely" to the lesson plan as it is sketched out at the beginning of the lesson for all to see. Sometimes I'll give them a hand-out, or extra set of "talking points." Other times, I'll get up from my workgroup and walk over to them for a moment to suggest something or give further instructions. The Lab Assistant is something like an extension of the Lead Teacher's presence. They don't have to know everything, just listen well!

One lament I sometimes hear from Lead Teachers is that they are "by themselves" in the lab too often. If you have the "by yourself" problem in your lab, cure it. If you have more than two computers, and your Lead Teacher is often alone in the lab—it means you are not getting elbow-to-elbow teaching. And that means you aren't getting the most out of your software or lesson plan. Start recruiting Lab Assistants and you may also get this bonus: this year's Lab Assistants are often next year's Teachers, and even Lead Teachers.

Recruiting Lab Assistant's can be a great outreach ministry.

One of my favorite lab assistants in the mid-90's was a high schooler named Mark. Mark was soft-spoken, very shy, and didn't want to go to his Sr. High Sunday School class. So I invited him to help me in the lab. Mark was also 6' 4" and played defensive tackle for the High School football team. When he entered the lab he dwarfed everyone. On Mark's first day the second graders were in such awe (or fear) that they wouldn't go near him during the introduction to the lesson I was leading. But when it came time to break into workgroups, Mark sat at the computer with them, and very quietly led them through the lesson. Mark and the kids in his workgroup relaxed and turned to what was on the screen. It was a very satisfying experience for Mark, and of course, the little kids came to idolized him.



This college student at a church in Yorkville Illinois started out as the lab techie, but became a teacher.

Another favorite lab assistant of mine was a Senior High named Justin. Justin was the stereotypical “geek.” He loved computers. But this skinny, curly-headed kid never felt comfortable with his peers. They thought he was odd, -and he was. But he was bright, and thought little kids were cool. Justin frequently poked his head inside our classroom to ask if we needed any help, and we always did. Justin consumed all the information I laid out during the lesson introduction, and when he go to the computer with his workgroup, he was in his element. Justin’s father was so happy his son had found a place to land at church, that he donated the new computer to the lab after Justin came home one day saying that we could use one. Justin volunteered two to three Sundays a month for two years before he went off to college.

Computer labs are something which family members can lead together. I first became acquainted with Tom when his wife joined our church staff. Tom would often be at church 2 or 3 hours each Sunday. He loved computers and soon found a home in our computer lab. Tom often brought his oldest son with him to teach. It was something they did together. My oldest daughter grew up in my early labs, and became an assistant teacher in later years. She also became the voice of “Robin” in our Exodus CD.

A Word about Previewing Software at Home

Each time you introduce a new piece of software to the lab or to a new teacher, they need to spend time with the program, and have a copy of the program’s teaching guide in hand. Ideally they’d join you in the computer lab to go over the software, but schedules don’t always permit that. Fortunately, most software can go home to be previewed.

As long as you have purchased the right number of copies of the program for your computers, teachers are welcome to install the program at home (or on their church office computer if you are staff) for preparation purposes.

Preview Warning: Just because it works at home doesn’t mean it will work at church. Always install and test the software ahead of time on the computers the students will use.



This picture shows older students studying the Bible in the computer lab at Lawrenceburg Seventh Day Adventist Church, Lawrenceburg Tennessee.

Older students especially seem more aware of interpersonal and personal space issues. But at the computer, those issues often melt away. I think it’s because of the side-by-side nature of the teaching. Direct eye contact between people who don’t know each other makes some feeling uncomfortable. Preschoolers like piling in front of the computer. Some don’t mind sharing, others don’t see anyone else but themselves in front of the screen. Some kids can get possessive of the mouse and keyboard. Teachers should encourage cooperative behavior not merely for the sake of the lesson, but as a way of teaching a Christian value.

Chapter 8: Teaching Schedules and Lesson Planning

What do you DO in a computer lab over the weeks, months and years? The answer is “anything you want it to do, just have a plan!” Most church computer labs are used for Sunday School. They are open almost every Sunday and have different age groups rotating into the lab to work on a lesson with some software. (And remember, your Lab Teacher doesn’t rotate. They help the teachers and classes coming in use the software.) The computer lab may teach the exact same story, using the exact same software three, four or five weeks in a row to a different age group each week. That saves on software and really helps your teachers.

Most labs follow a curriculum’s “scope and sequence” of stories. You could try to follow your **traditional Sunday School curriculum**, but they change the story nearly every week. That’s a torrid pace which your software budget will unlikely be able to keep up with. If you must follow the scope and sequence of the traditional curriculum, pick just a few *key stories* each quarter and get software to emphasize those key stories in the computer lab. You can also use quiz software to reinforce content previously taught in other classes.

Some labs create their own scope and sequence to supplement what’s being taught elsewhere. They might pick a set of key Bible stories and memory verses they want to emphasize in the coming year and teach them *in addition to* or in place of the stories being taught in the other classrooms. Stories such as the Prodigal Son, and the life of Christ are always appropriate to focus on. Probably can’t teach those stories enough!

Many Sunday School computer labs are found in **Rotation Model** Sunday Schools. Churches using this model teach the same story for four to five weeks in a row, rotating their classes into different “workshops” that teach the story through their own unique media. This is a pace the computer lab can usually keep up with.

Yet another group of computer labbers are what I call “**The Lone Rangers.**” Mr. Smith the 4^h & 5th grade teacher has two computers in his classroom. He turns them on about twice a month FOR the lesson, and nearly every week AFTER the lesson for a reward. Needless to say, Mr. Smith makes up his own computer lab schedule! But what invariable happens is this, other classes want Mr. Smith to share his experience and software. My point is this: a lab doesn’t have to do what everybody else is doing, or be used by every group in the same way. One thing is for sure, however, the kids will want more of whatever you do.



What to do when you can’t match up: Whether you change the story every week or every month, there are times when you just can’t find or afford or run the software for the appointed subject. Therefore, some months you just have to “punt” and do something different. Pull out an old favorite, or start up a game of Grand Slam Bible Baseball CD. Create a computer quiz on past lessons.

Matching Up Software to Your Stories

Many of the major Bible stories can be found in software, some cannot. Some CDs have multiple stories on them, a few have only one story per CD. And some programs are like utility infielders, -they can help you with almost any subject. I have created a **Bible Story Software Cross-Reference** at www.sundaysoftware.com that references all the major stories in the Bible and which programs have something you can use to cover them. I also have software lists that match up software to some published curriculum. CAUTION: Some published lessons were written years ago will reference out of print software. Or they may suggest a piece of software I wouldn’t choose, or something better has since come out.

Check my lists and lesson recommendations at sundaysoftware.com, and feel free to contact me.

September Lesson Example: This month you’re teaching the story of the Prodigal Son, so you grab copies of the Prodigal Son CD. I wrote it, so you know it’s teacher friendly and has reflection content. After you’re done using it for the next four weeks, you’ll shelve it for about 3 years until the story comes back around in your

curriculum. We created this story on this one CD because it's an important and frequently taught story. The guide has a suggested lesson plan.

October Lesson Example: This month you are teaching a story which doesn't seem to have a program dedicated to it (or you can't run it or afford it). You are doing the "Call of the Disciples," so you visit our website and see my suggestion to use the lesson in Life of Christ CD and follow it up with Let's Talk CD. You'll have the kids recreate the a "new call" to more modern professions (what would Jesus' call sound like to welder or salesperson?) The kids will be happy to see Let's Talk again because you used it several times already this year and they like it. See my "Call" lesson plan online and modify it.

November Lesson Example: You don't see a piece of software that directly matches up to your topic, so you email me and we come up with an idea to have the kids "create their own memory verse" using the ideas from the story they are studying. They'll create and play it using Cal and Marty's Scripture Memory Game CD, -which you already own and will use quite a bit over the years.

December Lesson Example: It's Advent, and you pick up Fluffy & God's Christmas Adventure CD which can be used for the next 3 years during Advent.

January Lesson Example: You're studying the Beatitudes, so you want to pick up copies of Galilee Flyer CD. But your budget is tight so you waiver. Then you notice that next year you'll also be studying the Lord's Prayer and The Kingdom of God, and both of those lessons are also in Galilee Flyer CD. This is a great example of how this year's curriculum purchases won't be tossed in a closet after you're done like print curriculum, but get used again for years.

"Utility" Software you'll likely use a lot

There simply isn't enough Christian software available to cover every possible story you are asked to teach. This is where your "utility" programs come in handy.

Kid Pix 4 –this creative writing and illustrating program is great. It's about whatever YOU want the kids to write and illustrate about. Because it can "speak aloud" whatever the kids type onto the screen, they can in effect, make a "talking Bible storybook." Overusing a program like this is a common problem. Use it only when you need to, and that will likely be at least 2 or 3 months out of the year.

Fall of Jericho Quiz Making CD and Bible Grand Slam CD –both of these fun quiz-game programs feature a Question Editor. Working ahead of time, you can make questions sets about the subject you're learning, or subjects previously taught. Jericho is a quiz game themed on a race to Jericho. Grand Slam looks and plays like Bible baseball on the computer.

Let's Talk CD – Students or Teachers make their own talking presentations. For each presentation they create an animated teacher to do their talking for them. Let's Talk uses the computer's text-to-speech capability and the kids love hearing the computer talk. Add talking quiz and discussion questions too.

Cal & Marty's Scripture Memory Game CD –virtually any lesson you teach can be condensed into a memory verse. Cal & Marty comes with a Verse Editor that so easy to use, even adults will be able to figure it out. And if there isn't a 'pithy' verse in your lesson to remember, have the kids create one!

An Example Monthly Schedule for a Typical Computer Lab:

Week One: The lab at **First Church** is reserved for the younger elementary class.

Week Two is for the older elementary kids.

Week Three the Middle Schoolers come in.

This month they are all using the Good Sam the Samaritan CD. The lab teacher stays there the entire month. (This is typical for Rotation Model churches, but is also a good plan for any church.) Next month they use the same schedule and same software again using lessons from the Life of Christ CD. Variation: Some programs could use two weeks, such as the Ten Commandments CD, so during that month, you schedule two weeks each for the

older elementary and Middle School classes. Different software programs and lesson plan needs will inform your schedule.

Example of a Varied Plan for a Traditional Sunday School:

This September at **United Church**, the 3 computers in the lab are reserved **just for the fifth graders**. They are using 2 of the lessons in the Exodus Adventures game CD. In October at United the Middle Schoolers get the lab, and they too will be using Exodus Adventures CD. The lab teachers from the first month will also lead the second month since by now they are experts at the software. In November, the curriculum moves into the stories of Ruth and Jonah, but the lab can only afford the Jonah software, so each week in November a different class comes in to use that CD. They do the same thing in December using the Fluffy & God's Amazing Christmas Adventure CD. For January, the lab teacher has prepared a set of quiz questions about the Fall curriculum and installed them on all three computers using the Fall of Jericho Quiz Game CD. Each class is assigned a January week in the lab for a grand review. That Spring the lab has some open dates which are offered to the teachers, but the Lead Teacher won't be there. Two intrepid teachers take two of the weeks because they are looking forward to the change of pace, and want something to improve attendance in the Spring. During the summer the lab is not used, as there is no Sunday School. The VBS uses the computers during their week to work on their memory verses each day.

The Awana Club at United uses the computer lab about twice a month for their memory verse and game time. The Sunday School and Club leaders get together to plan and share their software costs and split the cost of a new computer for next year.

A Rotation Teacher's Schedule:

Bob is the computer lab Lead Teacher at **Church of the Apostles**. They have a Rotation Sunday School. Every four weeks the story and software is changed. Every week he has different classes in his lab. This Fall they are using Kid Pix and Awesome Bible Stories CD. When the preschoolers come in, he pulls out Play and Learn Children's Bible CD too. Bob's church bought those programs 3 years ago. Three out of the four Sundays Bob is the Lead Teacher in the lab. But on the fourth Sunday he takes a break and his Lab Assistant leads the class when the preschoolers come in. Bob previews all the software, checks the website lesson ideas, and writes a simple lesson plan for himself and his lab teachers. Bob is 67 years old and loves tinkering with the hardware.

Last month, Bob brought the Women's Association into the lab for a tour, and several of them asked if he would lead their class using Pathways Through Jerusalem CD this coming Lent. Last Winter, Bob lead the adult class by projecting some Bible Atlas software and photographs of the Holyland he took on his trip.

A Teacher Uses 1 Computer in Her Classroom:

Jane at the **Church of Christ** has a laptop she brings into her 3rd and 4th grade class. She only has 4 students, and she's been picking up a CD here and there that match up to her lessons. This month she is using Awesome Bible Stories. She used it last year too, but only the first 3 stories on the CD. Parents are saying how much their kids love Jane's class. The next year, the pastor stopped by one Sunday and asked her if she could use two new PCs paid for out of the Memorial Fund. Now Jane heads up the lab as the Lead Teacher with her two PCs; other classes and teachers are now coming to her room to work with her.

An Older Lab, an Older Lady, and a Small Church:

I first met Mary (who name has been changed here) as she was starting her lab with three brand new computers back in 1997. But in the intervening years the church had some financial troubles, and the educator had to be let go. Mary and her son-in-law still led the lab, but for many years they had to do it with older software as there was no money for new, and their now-older equipment can't handle newer CDs. In fact, I suspect Mary bought most of the software out of her own pocket. Because their Sunday School followed a traditional curriculum which changes the story on a weekly basis, Mary's lab followed its own schedule of stories. Mary and the pastor use the lab to focus on key Bible stories which they already have software for. She also used the lab to do a lot of quizzing, which the kids liked because it's on the computer.

Mary taught almost every lesson in the lab with her son-in-law and his son helping. Two years ago they finally found two newer computers when her son-in-law's company was replacing theirs. Mary then went to her Women's Bible study and got money for several new programs that can run on the newer donated computers. They gave it to her under the condition that she also buy some software for the ladies to look at, and Mary would show them how. Mary called me to purchase new memory verse software, a new version of the quiz program she's been using, and some game software. For the ladies she picked Pathways Through Jerusalem.

About a year later, Mary emailed to say that she had come down with cancer and could no longer lead the lab on a regular basis. Her family, however, continued in her place. A year later, Mary passed away. The pastor called to buy some software and told me about her passing. He also told me this wonderful ending to her story. He mentioned at Mary's funeral how many people never would have guessed that she taught with computers. "Most people," he said, "probably thought this older woman was technically illiterate." He also mentioned how many kids' lives she had touched, including that of her 14 year old grandson who helped in the lab. After the funeral, a relative walked up to the pastor and gave him a \$500 check for "Mary's Lab." And that's how her name came to be on the lab door.

Aside: Over the years I've met several people like Mary. She was neat to work with, but not alone! Some of those I have helped with software have passed on. One older fellow, Mr. Nesbit in Houston, never talked less than 30 minutes -wanting to know about every detail related to the software he was using or thinking of buying. Another near Rochester left a small sum in his will to the lab he had started. At a conference in San Diego one year, a woman in her 80's pulled up a chair and proceeded to tell me how she had started using Commodore computers in the late 1980's with her Bible class. There's an article at www.sundaysoftware.com with stories and quotes from some of our oldest lab teachers.

A Children's Fellowship Lab:

Wednesday Night at **Resurrection Church** the 5th graders are working on the Books of the Bible in preparation for receiving Bibles in worship this year. They slip into the computer lab to use Bongo Loves the Bible CD. Coming up this Winter they are doing a unit on the Beatitudes. They have purchased Galilee Flyer to cover that subject, but discover that it also has a game about The Lord's Prayer on it, and that's another thing they are memorizing. The Confirmation Class is doing a unit on "How the Bible Came to Be" and the lab teacher whose son is in that class mentions that Bongo has a game about that very subject. The Confirmation Class asks the lab teacher to do a lesson or two for them with Bongo.

How Reverend Paul's Lab Evolved:

Reverend Paul at **Trinity** started using Life of Christ CD with his Confirmation kids in his office. They viewed select lessons and talked. Later he brought in Cal & Marty's Scripture Memory Game CD to have them memorize Bible verses required for the class. He put this CD on his secretary's computer since she is gone in the afternoon when the kids come in after school per a schedule. He did that for three years, and then when they upgraded the office computers, the older computers were put in the 4th-6th grade classroom, and so began their occasional use of computers on Sunday morning. Two years after that, they converted their Sunday School to the Rotation Model, and that classroom became the computer lab. The Church Library was moved into that same room and a Library memorial funds purchased two new computers and software, plus an internet hookup. Paul's lab teacher loves Christian music and brings in audio CDs to play on the computer before and after class. The library now has a collection of Christian rock for the kids to borrow. When his lab teacher saw the Actual Reality software CD (that has Christian bands talking about faith), they started using that with the Middle Schoolers who took over the Library/Lab on Sunday Nights.



How Yvonne's Daycare got computers for the Sunday School

At Yvonne's church, the Daycare where she works during the week received a grant to buy 6 computers because they reach out to low-income families. Yvonne and her husband William taught the 1st and 2nd grade class on Sunday and wondered if they could use the computers in the Daycare room. The problem was that the preschoolers used that room on Sunday mornings. So they came up with a plan to rotate the preschoolers twice a month for 30 minutes into Yvonne's room where she led a game, while William took the 1st and 2nd graders to the Daycare room computers. He only had four students, so they only turned on two of the computers in the Daycare. Occasionally, another teacher will ask William to lead their class in the Daycare computer lab, which he loves to do because William is a true computer geek.

The Point:

These stories represent real situations and people. Churches have many different schedules and needs. These tend to change over time as new ideas, new software, and new leaders are thrown into the mix. Notice that in each situation, however, there is someone who seems to be in charge. The lab has become a ministry for them. In some cases it didn't start big or overnight, but grew and evolved as they explored what was possible. Over the years we've been collecting our customer stories, their lab photos, and even contest winning essays. These can be viewed at www.sundaysoftware.com.

**Schedules can vary. You're in control. The software varies.
Needs change. Your ideas will evolve. Don't bolt anything down!**

Computer Lab Lesson Plans

Software is a component in a lesson plan, not a replacement for one. Yet this is one of the biggest misconceptions about software, --that it will do the teaching for you. It won't. Even the most self-motivated students and greatest software needs a teacher to go along as guide. The Gospel comes alive when it is personally shared. And most kids learn best when they have a caring adult working directly with them.

Some programs have a layout similar to a lesson plan. This is true about MOST of my own "Sunday Software -made" CDs, -the ones I myself have designed. I'm a teacher, so when I design a program, I design it to fit a teaching situation. I sometimes describe this as "lesson plan designed." In the first part of the CD you'll see me introducing the basic story content, then I'll start to salt the content with background and dig-deeper notes and activities; then I'll provide life application and reflection content. Along the way, I tend to drop study notes and extra questions to discuss **–for you the teacher to pick up on if you want.** I expect a teacher to be working with your kids when they use my software. I'm not naïve about students. Kids will be kids and skip certain content. They love to look for the wiggles. Therefore, some of the content in my CDs is there for the teacher to direct the kids to. You do that by previewing the software, reading my software outline and teaching tips (free to print online), and telling students before and during software use where they need to slow down and work on certain content and questions a little more.

Even if I haven't specifically designed the program myself, this is the type of lesson path I'm going to take in the lab: **Open-Dig-Reflect. Encounter the story. Take it a little deeper. Raise some issues. Apply it to your life.** Whatever the software program doesn't provide, I'm going to add it in my lesson plan. So if a program only tells the story, but doesn't have questions about the story, I'm going to create a set of questions for the kids. Pretty standard lesson planning stuff for the average teacher, but perhaps "news" to those expecting the software to do all the work.

What exactly is a lesson plan?

Not everyone you ask to teach knows what a lesson plan is. I was in a seminar in Dallas a few years back talking about lab lesson plans for almost an hour. Then a man raised his hand in the back and asked, "Uh Neil, could you explain what exactly IS a lesson plan?" I wrote "Lab Lesson Planning 101" on the plane ride back home. That article is at my website.

Here is the basic answer I gave the guy in Dallas. **A lesson plan is like a road map.** It tells you where to start, what turns to take, and where you want to end up. It marks out the problem areas, and makes alternate route suggestions. It also comes with some brief background material on the country you'll be traveling, and highlights points of interest.

If you've ever gotten directions online, you know that you can ask a map service to give you very specific directions. They will tell you to "Drive 1.1 miles and turn left; go 2.5 miles and turn right." Some people like that level of detail. Me? ...I just print out the picture of the map and make a few notes in the margin. **Some teachers like detailed driving directions, some need them, and some actually use them!** This is important to realize in all teaching, but especially in the computer lab. Some volunteers will just to turn on the software without preparation or knowing where to they want to end up. Others want to know exactly what to click on. Some teachers need a more detailed lesson plan than others. Some are more comfortable with a simple outline. Others need to know what you want them to say. Know your teacher's preparation habits and needs, and write your lessons accordingly.

My Usual Lesson Planning Practice: First I preview the software, read the teaching guide from my site, and then write out a basic lesson plan with talking points. If I have younger kids coming in, I make a point of writing out some of the story concepts in vocabulary that will work for them. If I have older kids I might write out a short handout with tech/game/content tips, and include a few questions for them to answer. Then when I start the lesson, I typically write out my lesson "agenda" on a whiteboard (a short version of my lesson plan), including the verses, and questions for the day. This let's everyone know where we're going and what to look for, including my teaching assistants. I highly recommend writing it out.

The Basic Outline of Software Lesson Plan

Most of my lessons follow this basic outline: *Open, Dig, Reflect*. I didn't invent that. This is how most lesson plans have always been designed. *They move from information to transformation.*

1. Pre-class **Pastoral** Welcoming
2. **Open:** Introduction to the Lesson for the Day
3. **Dig** into the Software
4. **Regroup** for follow up discussion and **Reflect**

As previously discussed, the Introduction is where I often pull out my whiteboard to sketch the entire lesson for all to see, especially my lab assistants. Sometimes I introduce the lesson with a skit. We also crack open Bibles and find the story. Sometimes we wait until we enter the software to see the scripture (the software *is* the Bible they will open in many cases).

Sometimes we do the major portion of our discussion right at the computers. Other times we collect back at the discussion table. It depends on the topic, the software, the students, and the number of teachers.

To this basic outline I might add an art project, or show a videoclip, or do a fun skit. Some lab teachers might go into a special piece of teacher-led software at the beginning of the class to wet their student's appetites before launching the kids into their own software. The variations are endless, the lesson plan shouldn't be!

In some churches, the teacher in the lab doesn't write the lesson plan. It's quite common in many computer labs for a Lead Teacher or educator to get the software, preview it with a copy of my Teaching Tips in hand, then write the lesson plan for someone else. I'm ambivalent about that. I know that if the Lead Teacher or Church Educator does NOT write the plan, it might not get written by the volunteer. They might just go in without a plan, having only previewed the software. If that is going to be the case, and you can't break that pattern, do this: **#1** Get in there yourself to make sure you have recruited good teachers, not just enthusiastic volunteers. **#2** Make sure the teachers are teaching with the same program for several weeks in a row. This will take advantage of the volunteer's ability to *learn the hard way* the first week and correct their mistakes in subsequent weeks with different classes.

Most teachers WILL improve their lesson after they have taught it once, but only if they get to REPEAT the lesson and software program again. (I keep repeating this idea because it's a great one!)

The best part about teaching in a “rotating” computer lab, is that it’s an incredible luxury to be able to learn from your mistakes and real classroom experience, even when you “think” you are prepared for the first week. When I teach in my lab, **my first week is pretty much a test run** of the lesson plan and software, even when I’m using software I wrote!

Another benefit of this rotational approach, is that by the following week, my well-written lesson plan is at arm’s length because I remember it -just having taught it. I’m better prepared to know when to move in and out of the various sections of a program, and how to better ask questions and point things out.

I have written free extensive outlines and lesson guides for all the software I recommend.

I started doing this long before we started our company. The guides were not only helpful to my teachers but to me! I have to use my own Teaching Tips from the website to prepare my own lessons. **They’re free.** Go to the CD’s webpage at sundaysoftware.com and print them. In my Outlines you’ll notice a lot of lesson plan “ideas” and suggested “adjustments” you can make depending on the age of students who are using it. *Handy.*

Neil's Ten “P’s” of Great Lesson Planning 😊

Prepare on the scripture.

Preview the Program.

Create a Lesson Plan

Don't Procrastinate.

Pray, Please!

RePair and imProve your lessons by rePeating them with other students.

Planning, previewing, and praying seem *pretty* obvious, but I’ve met teachers who don’t do any of it. When you repeat with a program several weeks in a row to different classes, it gives you the opportunity to repair your lesson plan. This will also prepare you better for the next new program as you’ll know what works and what to watch out for.

Toni Nettles in Houston Texas has been the Church Educator in two different churches and has set up two computer labs. Her first church’s lab didn’t go so well, mostly because she had a “techie” running it, not a teacher. She writes,

The best thing now is that we have teachers that were willing to learn how to teach with computers, not just use them for entertainment. My best advice is to remember that computers and software are tools, not an end in themselves. Read Neil’s book and teaching tips. Have a lesson plan.



Chapter 9: Stretching Software Across Age Ranges

Every program has a “natural age range,” but learning how to stretch a program beyond that natural age range –to older and younger kids, is a trick you’ll want to know. Stretching keeps your budget under control because you can use what you purchase with more kids, and it makes your planning easier.

Read Chapter 10 for more insights on this subject. Should have made them all the same chapter!

Some important observations:

- Most Christian education software titles that have come out in the past 7 years were designed to be used with children grades 3rd --7th; i.e., school kids who can read. Many of these same programs can easily be used with K through 2nd graders and young teens if the teacher knows how to pull it off.
- Many older titles were not designed for a wider audience. Their age ranges are a little smaller.
- Many “Bible” software programs, such as Bible Atlases, are made for an older audience.
- There have been a few programs made specifically for non-readers and preschoolers. However, because computer labs historically haven’t had much to choose from, we’ve learned to adapt just about everything to our needs. Younger kids can use almost any program as long as they have help.

Most churches have elementary classes and Middle Schoolers. Some have preschoolers and High Schoolers coming in too. I’ve had both preschoolers and Middle Schoolers coming through my lab, as well as elementary school classes. So it is safe for you to assume that if Neil has designed the program (“Sunday Software designed”) I’m designing-in some features and content that allows me to use my own programs with my wide age range of students. Having said that, like many computer-labbers, I have had to learn how to stretch other software beyond its natural age range to fit my lab.

“Stretching” Software Across an Age Range

1. **Some programs stretch more easily than others.** A program like the Play & Learn Childrens Bible CD doesn’t stretch beyond 2nd grade in most circumstances. The voices and graphics in the program are too juvenile for readers. Some churches won’t even use it with their 2nd graders. But it’s great with non-readers.
2. **It’s easier to stretch software designed for older student’s down to lower grades,** than it is to stretch a younger kid’s program UP to older grades. Older kids need or expect more sophisticated software. Young children find the mouse sophisticated! A teacher working with younger children can bypass content that’s not for them, and rephrase wording on a screen as they read it to their non-readers. In many cases, the younger kids won’t even know what was skipped. Whereas, older student can be sensitive to things that might seem baby-ish.
3. **Some computer lab set-ups and teacher make it easier to the stretch software.** If you have 3 computers, 1 teacher, and 9 preschoolers, good luck stretching older kids’ software to your preschoolers. No way can the teacher read-rephrase everyone’s screen content and help them navigate difficult sections. But if you had a lab assistant or two, you could do it. If you put headphones on your students, they won’t be able to hear you rephrase the software. If your computers are in a pod, -their monitors all facing away from each other, the teacher will be hard-pressed to cover two at once.
4. **Prepare to be surprised.** With practice, you will be surprised by how many older kids programs can be used with younger students, if you handle them the right way, know what to skip, and have plenty of help.



This teacher is in the perfect position to work with her preschoolers.

You will also be surprised how well your **young teens** do with programs made for elementary school kids, once your young teens have been coming to your lab for several years. In my experience, teens who are used to coming into the lab, are more comfortable using whatever you put in front of them, compared to new labs with new teachers, and new lab students.

You'll also probably be surprised how important "play" and "winning" is to older students. This allows you to use some slightly younger software with them, such as the Interactive Kids Series CDs, because they have some playful games and quizzes in them.



Pictured: Our Fluffy & God's Amazing Christmas Adventure CD is a good example of software that *stretches the age-range*. You might think "Fluffy" was for little kids, --the sheep is pretty darn cute. But the CD has a lot of humor in it, most of it delivered by God who is just a wee bit excited to tell the story. Older kids and youth like that. Most of the CD's content is narrated, and there are extra notes and questions for deeper discussion.

More Age Range Observations....

Sometimes it's HOW you introduce and use a program that makes all the difference with older students. My young teens know me and trust me. They are used to structure in the lab and know that whatever we do, we'll have a good time and they'll be back soon. With all ages, it's important to know the program intimately. Knowing what you need to skip or focus on is important. You'll find my online Teaching Tips and program outlines full of age appropriate suggestions from real experience.

You'll note that in a number of programs I've designed that we tend to aim a bit high in the age range --4th -6th grade optimally, and put in special content just for the older students. This way most pre-teens and Middle Schoolers are happy. And that's important. I have a built-in bias toward ages 10-13, because the research says this is the age at which their faith either gets connected or often disconnects. That age group is also more attracted to technology and can benefit from it the most. Kindergartners think coloring is a fun time.



The kids at my church enjoy being together at the computer. Age differences tend to melt away as they focus on what's on the screen.

Tips for Teaching Preschoolers & Non Readers in the Computer Lab

1. Recruit “Bible Lab Buddies” or “Keyboard Buddies” to sit with them at all times and help.
2. Read text for them. Non-readers are used to being read to. Interpret and edit the text on the fly. They won’t know you’re changing it.
3. They love to type, and just need your help to find the write keys. For example, they can type short sentences or verse in Kid Pix 3, Let’s Talk CD or Cal & Marty CD, if you show them the letter, or write down words or letters on a card for them. They can match those shapes on the keyboard (kind of like a game to them).
4. They can’t always maneuver the mouse, so put your hand ON TOP OF THEIRS to help guide their hand. Don’t take the mouse away from them.
5. Avoid tight mousing spaces and mousepads. Little kids need a big area to roll their mouse.
6. Their timing may be off when trying to press a key in a game to make something happen, so help them, or cue them.
7. Bring out props/dolls/stuffed animals to illustrate points being made in more “text” oriented parts of a program.
8. Visual images in the program are *word pictures* to them. “Read” the pictures... talk about what’s in the pictures.
9. Surprisingly, preschoolers will stick with software longer than most other activities, if they have help. Computer labs have fewer potty breaks than other young classes.
10. If you have more than one student per computer (and you should) let each student repeat program sections with each of them at the controls. When preschoolers use software, they often want to do exactly what their fellow student JUST did. Repetition isn’t a bad thing! But it may seem odd to an adult. It will also extend their “time in the software.”
11. Don’t be afraid to use Quiz Programs with younger children. Just make the quiz questions EASIER for them and READ the questions and answers to them. They will enjoy knowing they are “ahead” or “got it right” even though they can’t read a thing. Tip: Give preschoolers and Kindergarteners only two possible answers instead of four in a multiple choice quiz game like Fall of Jericho CD. Give them true or false questions too.
12. Save files often when using a program like Kid Pix 3 where children are creating materials.
13. Keep a pack of monitor screen wipes in the lab. Let them touch the screen to point out who’s who in the picture.
14. Remember to pass along your insights, successes and failures to fellow teachers.

Chapter 10: Preschoolers, Middle Schoolers, and Special Need Kids in the Computer Lab

Most of the available Christian software is aimed at elementary school children. The reason for this is simple, that's where most Sunday School attendance is. What eventually happens, however, is that the younger and older grades want "their turn" ...and why not!

Adding into this mix has always been a desire on the part of some churches to meet the needs of their special kids, -the ones who don't fit in for one reason or another, --the attention deficit kids or mentally challenged kids whose presence is sometimes a disruption to the other students, or beyond the capability of many of our volunteer teachers.

This chapter offers a lot of time-tested classroom advice from our customers and my own experience. The most important 'answer' however, is the same one found throughout this book: find the right person to work with these kids and you've won half the battle.

Preschoolers

Flip back to the previous chapter, Chapter 9, for my tips on stretching software "down" to your preschoolers. In a nutshell: preschoolers can use older kids' software IF they have help reading and navigating, and the helpers know when to skip or rephrase content.

Middle Schoolers

You might wonder what a software guy knows about Middle Schoolers. Actually, quite a bit. I've been helping with Middle School Fellowship and Sunday School classes since I was 17. Over the past 20 years of teaching *with computers* I've had teen classes in my labs many many times. I'm currently working with our Middle School Fellowship and Sunday school class at my church. I also survived raising 3 daughters through their teen years (and them having Dad for a teacher). I love Middle Schoolers ...and can't wait for them to get older.

Two quick observations:

- ☺ Middle Schoolers would give Jesus himself "a run" if he were their teacher.
- ☺ And to say "Middle Schoolers love computers" is an understatement.

This age group REALLY LOVES computers. My quietest 7th grade girl comes to every meeting and class with her cell phone that retrieves her email. One recent former Middle Schooler of mine has gone off to college to get a videogame designing degree (really). My own 7th grader sits at our living room computer while she watches TV across the room so she can talk to her friends online. TIME magazine recently ran a cover story on this age group and the phenomenal degree to which they have embraced technology.

Yet many Sunday Schools run labs only for their elementary kids. Why? In many cases it's because the children and youth programs are run by two different groups in the church. There's this traditional dividing line turf issue. And if I may opionate even more, many youth leaders believe they can relate to teens just through power of their own amazing charisma and conversation. They want to just "talk to" their teens rather than teach them with materials and media. Problem is, the Middle Schoolers could care less about your dividing line and turf issues. And they are developmentally at one of the worst times in their lives for "talking to adults." (Youth leaders never like to hear this, but it's true.) If you are not putting your Middle School class in the computer lab on some regular basis, you're not only missing a great opportunity to reach them, *but you don't understand them.*

Middle School “developmental issues” --coupled with their love of computers and all technology presents some very unique challenges to the church computer lab and its teachers. For the past few years, I’ve had 6th–8th graders rotating into my church’s lab on both Sunday mornings and Wednesday nights. Recently, when I casually asked them if “they still wanted to use the computer lab next year,” **they were in horror at the thought of *not* getting to use it.** The young teens in my church have grown up using our computers. In fact, I think that’s one of the reasons why it is so easy to have them in our lab... **they know what to expect and feel like they own the place.** Not that this makes them great students, but it’s a start.

Mark this down, --you raise and train kids to be good students in your lab. If you begin now with your younger kids, in two years your Middle School students will have already been in the lab as younger kids and have good habits and expectations.

Now we just have to get the teachers ready for them.



What software can you use with Middle Schoolers?

Middle Schoolers can use almost any software, even really “young” software, if you sell it to them and put some spin on it. Young teens can be self-conscious about not wanting to be treated like little kids. But occasionally you have to dip into something that is a “little young” for them (such as any of the Interactive Bible Series CDs) because you can’t afford or don’t have software made “just for them.” The first thing I do is tell them, *“I know this isn’t for you, but I thought we take a look anyway.”* Those opening words grant me a lot of grace. My Middle Schoolers and I have a good relationship and they trust me. Humor helps, and some “psychology” never hurts.

One year I was stumped for something “different” on the cross, so I decided to begin a discussion by asking them to view a lesson presentation from the Play & Learn Children’s Bible CD –a CD for preschoolers and early readers. I told them we were going to see a “simplified” version of the cross story, and set up a contest between the computers. I wanted them to “write down everything that Play & Learn CD left out and ‘smoothed over’ about the cross story.” Play & Learn naturally softened some of the cross story for the little kids, and my teens immediately noted it had left out the nailing of Jesus’ hands and feet. We had a spirited debate about whether or not those were significant details.

Occasionally I’ll run into teacher who thinks Middle Schoolers need more “serious” software. There is some very cool “serious” software, such as HolyLand 3-D CD and the Illumina Bible DVD. But if that’s all you got, your Middle Schoolers will start to complain (they are great whiners, which is part of their charm, don’t you think?) Teachers who want to treat Middle Schoolers like mini-adults, or even High Schoolers are usually the wrong kind of teachers for this age group.

Middle Schoolers love to play and they respond to quirky humor. In the software I design, I try to remember that. You’ll see a lot of funny odd things like bread crumbs along the lesson path. In Elijah & Jonah CD, we made a little animation of the Prophets of Baal repeatedly spearing themselves in the head as they danced (just like the Bible says). And we added a button for them to “re-spit” Jonah onto the dry land. They love stuff like that. Software allows young people to “PLAY THROUGH” the story. The “play” creates engagement. It turns on brain cells. Many adults like playful software too. If you have teachers who DO NOT LIKE playful software, they need to be retired.

Secret Insight #49:

The following list of ideas works with teens too, and every age group.

Anything that's like a game or has competition in it will go over big.

Middle Schoolers love to play. They are hooked on videogames, the internet, and are still playing a lot of extracurricular sports. This means that programs like **Galilee Flyer**, **Bongo**, **Exodus Adventures** and all the games in **Elijah & Jonah CD**. They also love the quizzes in software. If one computer workgroup doesn't do so well in a **Life of Christ quiz**, all I have to point out is that another workgroup has a higher score, and the kids will want to take their quiz again. Be careful not to create long quizzes that are too hard in programs such as **Fall of Jericho CD**. It can backfire. Middle Schoolers don't like to look stupid in front of their peers. (Their first impulse in all things is to ask "how will I look to others if...")

They like programs they can change. So it comes as no surprise that our Middle Schoolers won't leave our new **Let's Talk** program alone. That actually was a bit of a surprise. I had forgotten how much Middle Schoolers love to type and love to make the computer "do things." Making the computer talk aloud is right up their alley. All I have to do is clearly set up the task and monitor their progress, and...kick them off of it after the class is over. They want to keep playing it.

Cal & Marty's Scripture Memory Game CD is another good Middle School program. They get to "program it" by adding verses and quiz questions. And if they take too much time solving a verse, or I want them to do it again, all I have to do is say "try beating so-and-so's score" and they're instantly back at it. I recall one Wednesday evening when our 6th and 7th graders were in the lab working on memorizing Colossians 3:8 about "anger" (how appropriate for that group). Our pastor walked by the door and looked in thinking there was something wrong because the kids were "too quiet." Then he realized they were intensely trying to win the memory game.

Monitor their progress

Middle Schoolers are both naturally playful and devious (older teens feel less of a need to prove themselves with computers). Left unattended, un-managed playfulness turns into goofing off. This is where "who the teacher is" really comes into play. Middle Schoolers can smell a "Cream Puff" or "Harvey Milquetoast" teacher a mile away. If your Middle Schoolers "rotate" into your lab, one of the most important things you can do is **make sure their regular leaders come with them**. The Middle School leaders likely have figured these kids out. They know which ones to keep an eye on, and how to leverage their attention. In lieu of their regular leader, make sure you have a **strong** computer lab teacher. Then, when the kids get in the lab, tell them upfront EXACTLY what you'll be doing that day. This age group wants to know "what are we going to do today" more than any other. Middle Schoolers can be full of anxieties, so let them in on your agenda and don't be afraid to provide structure.

Middle Schoolers have a strong sense of righteousness and strong desire for "fairness." (In case you've never done it, playing games with Middle Schoolers is all about "fairness"—but they love to cheat, as long as no one else is allowed to cheat, of course. Too funny.) They are crowd followers and mob lovers but respond pretty well to clear lesson structure and clear agendas. If they like you personally, they will respond well to you. So don't be overly structured and stiff. Keep it real.

Middle Schoolers respond well to personal presence.

If your teachers aren't sitting right at the computers with the students, you're missing a key ingredient in working with this age group. There's a psychological component to this as well. At this age they are starting to get physically uncomfortable with their mom kissing them in public. But they love being bumped and tapped. And as long as

you're looking at the screen with them, and not face-to-face, they don't mind talking to you in close proximity at the computer. Try close proximity discussion away from the computer, and they will visibly retreat. Funny.

Structure, Structure, Structure (with a smile)

Middle Schoolers *think* they want free-time, but never know what to do with it. They like goofing off, but can be rather compliant when authority figures are around. This group especially appreciates seeing an agenda posted and knowing what comes next. Middle Schoolers have a desire to please you, which is one of the redeeming qualities they have that many older teens suppress. They will follow your outline as long as you're there with them. They will be quick to skip content, but will compliantly go back and do it if asked. They aren't inclined to discuss things openly, but want to get their written answers to a question turned in on time if you give them a countdown. This is the group that wants to know "when we'll be done" and as long as your answer gives them something specific in the way of steps or time they can live with it. In my experience, a relaxed but visible lesson agenda gets you further than a busy one with this age group. Would they all rather just be hanging out watching cable and surfing the net? Yes.

Include Play Time

At the beginning of every lesson with Middle Schoolers, you need to tell them "when" and "how long" they will have to play after the lesson. Ha! They'll probably ask you anyway before you get the chance to tell them! Middle Schoolers have a high "need to know" and high need for "being able to just have fun." If you don't schedule some play time into the lab time, they will find a way to goof off during the lesson anyway.

How to Get Them to Talk

Believe it or not, Middle Schoolers love to talk. Just maybe not to you or in the way you think they should be talking. This is the age when phone and instant messaging is at its peak; ...probably because it allows them to share at a safe distance. Put those same kids facing each other in folding chairs, and no way will they talk, unless it's about something gross.

In class, some (most, actually) just might not want to look "uncool" or "childish" by talking with the teacher. **Their ego's safest answer is always "I don't know."** You need to find ways to work around it, instead of banging your forehead against it. When everyone is looking at them, they feel self-conscious more than any other age group. **That's why teaching AT the computer actually helps them**, because they're not eyeball-to-eyeball with everyone. Now you also know I invented the **Let's Talk CD**. They can design an onscreen character to do their talking FOR THEM. We even have their character "pray" for them at the end of the lesson. It's really a funny thing isn't it?

Figure Out Who the Ringleaders are...

Middle Schoolers follow the cues of their peers more than any other age group. It's almost a mob psychology. A peer who has strong social skills and a "cool" factor going on will be the leader of the group, even though no formal voting takes place. It's just the way their world works. **This leader can help your lessons or hinder them greatly.** Identify the leaders early, and cater to them. They want the attention, and will set the tone for everyone else about "what's ok to do or say." I know this sounds counter intuitive and even wrong, but it works. Giving kids your attention and making them feel attended to is a good thing. Just make sure you spread it around. If the ringleaders follow your lead, the others will follow.

Corollary: Find out who the "computer geeks" are...

They often want to show people how much of a computer geek they are, and that means they can **sometimes work against your lesson**. They want to flip through everything, or try to thwart the controls, or can't wait to get into whatever to show everyone they are techno-cool. Actually, I like to talk to these kids because I'm a geek too (though more of the pocket-protector variety, my daughters say). Part of what they want is recognition that they ARE cool with technology. (And that is a lot better than trying to be cool by taking drugs.) Sometimes I'll ask "the geek" to help with a "not so geeked" kid. Or I'll ask them to come in early and stay late to turn on/shutdown

the computers. Occasionally I'll have my geeks preview a new program after class. Over time, it works miracles. And when they are older teens, they make great lab assistants.

A lot of the time, I recruit these "leader geeks" to help me teach the younger kids. **It is an amazing thing to see a Middle Schooler go from "working against the lesson" to becoming a model student**, all because they are teachers now too. It's as if they are on the "inside" now because they have been asked to lead.

More Tricks 'O the "Discussion Trade"

Visual redirection... Middle Schoolers seem to respond better when looking at visual images other than you and their fellow students. Meaning: you'll likely have a better discussion about a movie if you're all looking at clips. You'll likely have a better discussion about a lesson in Life of Christ when you are looking at that software, or showing them one of the pictures from the lesson they just took.

Response Misdirection... If you ask a Middle Schooler what THEY think about a Bible passage, they are likely to dummy up. But if you ask them what a MOM, or a Teacher, or a young kid might think, they can respond because it's "not about them." I use this technique in Kid Pix 3 a lot. The drawing tools are a bit elementary for them, but the talk-back typing tools are not. I'll ask them to draw a crazy scene, such as "the Pentecost story as told by Pirates," then ask them to "state the meaning of the Gospel in Pirate language." Or, "define the Good News in terms a Baby would understand." Works every time, and it's fun. This is the same principle behind our Let's Talk CD.

Anonymous Response... Sometimes I collect their responses to lesson questions on anonymous slips of paper. Then we play a game of "who wrote this." It greases the skids for follow up discussion with the person who wrote it. Or if nobody claims it, others have fun adding to the answer. Making discussion into a GAME is sometimes a great way to get the ball rolling. Anonymity creates a safe zone too.

Move on Dot Org... Don't linger on a question or subject too long. Resist believing your monologue is the required lesson element! Impress them with your love, not your long-winded oratory.

"Special Needs" Kids and our Software

The following comes from an article I wrote for our website about our experience providing and teaching with software to special needs kid, and the invaluable insights of our customers.

Every year I'm contacted by pastors, parents, and teachers looking for software for their special needs kids:

- autistic
- attention-deficit
- mentally or emotionally challenged
- hyperactive
- and sometimes just a kid who doesn't fit in or is having a hard time in class

The parents and teachers know what many of us know, and what a decade of education research confirms: computers COMMAND the mind and body's attention, making them an especially helpful tool for those teaching special need kids, many of whom are easily distracted or have trouble in a social context. The parents and teachers see the positive effects of computer-assisted learning at home and school, and they want the same help in church.



Teachers love having a tool that works with special need kids.

And in many cases, getting help is not only for the kids, it is the difference between the parent being able to go to church or not.

Interestingly, what's so attractive to special needs is ALSO what's so attractive to the rest of us. Volunteer-led Sunday Schools not only struggle with special needs children, we struggle with "regular needs" children who have attention problems due to boredom, or who easily disengage because they know they are "volunteer" students who aren't going to be graded. Disengagement and disruptions challenge us for whatever reason, ..and computers have the attractive power to overcome it. That's what first got my attention back in 1990 when I didn't even like computers.

A study done by Purdue Univ. showed that learning challenged children don't necessarily "learn better" at the computer, rather, what changes is their classroom behavior, --it improves which allows them to learn longer in a manner that's less disruptive or distracting to everyone concerned.

This is why I often hear parents and teachers of challenged children say things like:

- "He doesn't get up and wander around as much."
- "He's calmer in the Sunday School now because he knows he's going to get on the computer."
- "She is quieter at the computer where before she would talk out of turn and disrupt the class."
- "He doesn't get agitated as much."

The same holds true for our more typical students. Years ago our pastor walked by our computer lab and thought something was wrong because it was so quiet. "Is anything wrong?" he asked, and I said, "Nope, they're just learning Psalm 23."

Psychologists believe that one reason computers are helpful to special needs children is that they don't require the complex set of social skills that a classroom does. Working in small groups, or having to make eye contact across a table, can be daunting to many children, special needs or not. The focus on the screen helps buffer the situation, and personal space issues seem to melt away at the computer.

The effect on the parents of special needs kids is often profound.

Case in Point: Two years ago a parent bought software from us for his son Ben to use on a laptop which the pastor had bought for the boy. A group of teens volunteered to be "Ben's Buddies" each Sunday. Until this project, the father seriously questioned whether they could continue to go to church as a family with Ben being a constant disruption in the classroom. Now Ben can't wait to go to church, and he's even helping younger children at his computer.

How are churches scheduling computer time for Special Needs Kids?

My customers are describing solutions that are often as unique as the child's needs and church's resources. But in general, they are either supplementing that child's Sunday School or Fellowship lesson time with "computer time"--inside or outside their classroom on an occasional basis, OR, they are using computers on a regular basis in an individualized approach with a helper assigned to the child. Either way, it's quite a ministry and commitment, and we're thrilled to help.

What software are they choosing?

The choice of software depends on the needs of the individual student. For example, some special needs children ages 10-12 do well with software designed for their grade level, while others need to use younger children's software. Some do well with story software, while others do better with puzzle or scripture memory programs. Some excel with Kid Pix's illustration tools but need help with creating text in that program. Others have difficulty with mouse-drawing, but do well with point and click. Some challenged children get hooked on using one program over and over again. One customer's mentally impaired son just wants to play Bongo every Sunday, and his parents are happy because it means they are called out of worship less often.

This is part of the challenge of teaching with software... figuring out the particular needs of the students, and having the flexibility to adapt. And in the case of "special needs" the real "software lesson" becomes the effort itself, --the expression of care and education for the child, but becomes an example and opportunity to the other students and parents.

What's sauce for the goose....

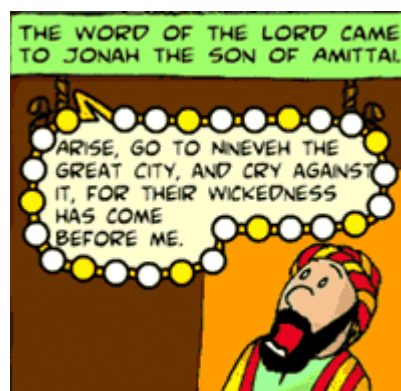
I have often quipped that "ALL our Sunday School kids are learning challenged". They are disabled by doubt, --by lack of compelling methods, --by competition from the culture for their attention, --by poor faith role models in the home, --and by their own attitudes and disabilities. We can't afford to bore them away. We have to bring our best efforts, and best tools.

If there's a more important and challenging ministry in the church than teaching our kids, I don't know what it is.

An Aside...

When I was working on designing our Elijah & Jonah CD, stretching across the age range was foremost in my mind. What jumped out at me about these stories, however, was how much Jonah is like a Middle Schooler. "I don't want to do what you say." "It's not *fair* that you should save Nineveh." And then he tries to avoid God by running away from the problem. God is *so patience* with poor Jonah, ...but persistent. At the end of the story, Jonah is upset and yells at God. God sets him down and sets him straight. But Jonah doesn't respond...yet. He just shuts up.

Then there's Elisha in the Elijah stories. Eager-beaver Elisha, is the would-be prophet who follows Elijah like a puppy dog until finally Elijah says, "What do you want from me?" And Elisha responds, "I want to be like you." How like a Middle Schooler! Of course, Elisha stays by Elijah's side, and then the most amazing thing happens, Elijah is taken up in the whirlwind, but his prophet's mantle is left behind. And Elisha puts it on. The kids we are teaching are the young Elishas. The software, and in this case, Elijah-Jonah CD, helps them pick up the mantle from us. Here are a few snapshots from that CD.



Chapter 11: Other Ideas for Computers in Christian Education

Spicing up your Summer teaching with Christian software...

Many churches use their computers and software to spice up their summer Sunday School or Vacation Bible School. In fact, some teachers and leaders have been known to use such “creative programs” as a way of introducing others to the idea and results of using Christian software.

Certain software programs work great in summer’s laidback atmosphere, and do a good job at promoting attendance. Bongo Love the Bible CD and Galilee Flyer CD are two programs that have that reputation. Each is in a 3D game format, so they are a lot of fun. And each program is easy to wrap a fun theme around, especially Bongo. Bongo is an orangutan that runs through the jungle learning “about the Bible.” Churches will hit the Oriental Trading Company catalog (www.orientaltradingpany.com) to pick up inexpensive inflatable monkeys and palm trees, and some “jungle” or “Hawaiian” decorations. Pictured on the right here is a photo from one such “Bongo” summer lab. ☞ I keep a “Summer Ideas” webpage at www.sundaysoftware.com/summer.htm



A number of years ago we purchased two camping tents and put them in our Fellowship Hall with two computers inside them on top of sleeping bags. A pretend campfire on a green rug between the tents served as our discussion area. It wasn’t hard to guess how well the kids would like this set-up: tents + sleeping bags + computers = happy campers.

Summer is also a great time to REVIEW what was taught the previous year. There are a number of Quiz programs that enable you to build question sets about previously taught content. Back in the early days of computing in Christian education, quiz programs were about all we had to use. It really taught me the value of refreshing the memories of our students. It was also a tool which pointed out the content they had not learned as well as we hoped! Favorite quiz programs include, the Fall of Jericho CD, which is a quiz program themed as a race across the Sinai and can be about any subject you create a question set for. Fall of Jericho comes with an easy to use Question Editor. I like to say that Jericho’s editing capabilities are “so easy, the kids will have no trouble showing the teachers how to do it.”

Using Computers in Vacation Bible School...

Computers and Vacation Bible School are a great match. Most VBS curriculum feature “stations” or “workshops” decorated according to the VBS theme, and a computer station can fit right in. Many VBS curricula feature memory verses, so a program like Cal & Marty’s Scripture Memory Game CD fits right in. Creation and Exodus are popular VBS themes for which there is some great software. I annually review the most popular VBS curriculum and cross reference their lessons to our software. Visit our website.

If your VBS stories match up well to software -that’s always a plus. But you can also create computer quizzes about your VBS content for use everyday, or at the end of the week as review.

Because VBS is a temporary program, it lends itself to borrowing computers for the week. So it might be a good opportunity to introduce the idea of using computers all year round. VBS programs attract visitors too, so it’s a good time to show that your program isn’t the same-old.

Using Computers in Confirmation...

More and more pastors are using computers to enhance the experience of Confirmation. "Confirmation" is the program most mainline Protestant churches use to help young teens make a commitment to Christ and his Church. It's pretty typical of Confirmation classes to have a group of scriptures or part of a Creed to memorize, thus a program like Cal & Marty's Scripture Memory Game CD comes in very handy. Many Confirmation programs do what I call a "Crash Course in Christianity" -and thus, programs like Discovery Interactive's Life of Christ CD, and Actual Reality are quite popular. In some cases, pastors have been known to send these CDs home with a list of questions to answer and bring back for discussion.

Using Computer in Adult Education...

Many computer labs look for new ways to share their equipment or software with other groups. One of the most likely is an Adult Education. It's not uncommon for a lab teacher to see a program like Pathways Through Jerusalem CD, or HolyLand 3D CD and want to project it in an Adult education setting.

Projecting Software on the wall...

LCD projectors are becoming as common in churches as the film projector was back in the 70's and 80's. They are a great way to show a program or video "5 ft High" on a wall for larger groups. Inexpensive projectors start at around \$400. They can hook up to DVD players, VCRs, or the monitor port on your computer. Buy a set of amplified computer speakers. Some Sunday Schools will project scenes or activities from some of our software during their Gathering Time or Children's Worship.

Two important things to note about LCD computer projectors:

1. The bigger the group, the larger the room, and the brighter the room, then the more powerful projector you'll need.
2. Projectors are not substitutes for the right number of computers in a lab for children. There is a difference between watching a teacher control software projected on the wall, and getting to navigate it yourself. We learn better when we are engaged and doing.

Some computer labs use projectors *in conjunction with* multiple computers running individual copies of software. Teachers will introduce a lesson or program from one computer hooked up to a projector for all to see. They might project the Bible verse, or some pictures to begin introducing the story. Or they might demonstrate the software that the children are going to be using that day. In a large lab, that's a bit understaffed, projectors can be a great help.

Some software programs project particularly well with larger groups. They include Pathways and Actual Reality, and the Ten Commandments CD. Others are great to kick-off a lesson with, such as HolyLand 3-D. View the Articles section at www.sundaysoftware.com for an updated article about using projectors in Christian education and a list of suggested software.

But....using projectors to REPLACE the need for multiple computers turns the computer lab into a spectator experience. Most software is designed for interactive, close-proximity use. It's not trying to be a movie. It's a different medium.

A Creative Use of a Projector in a Computer Lab

Churches have been bringing in projectors for special occasions for years. But I've never heard of one quite like this.... The Lawrenceburg Church in Lawrenceburg TN (see picture next page) hooked up two USB keyboards and one USB joystick and mouse to one central computer, in order to let three students work together to navigate the jungles and answer Bible questions in Bongo Loves the Bible CD. That's possible these days with a computer that has multiple USB ports. (USB is a type of cable and plug). It's also possible because games like Bongo have many

navigational options. Players must use the arrows, home & end keys, and mouse in Bongo to fully play the game. Kids like playing together, and cooperative learning is one of our values. The Lawrenceburg Church simply extended that concept from a technological point of view. Next time you schedule Bongo into your lab, bring in an extra USB cabled keyboard or two and plug them into your computer(s) so the kids can play cooperatively.



Here is a picture of students at the Lawrenceburg SDA Church in Lawrenceburg Tennessee working together in the Bongo CD. The Lab Teacher hooked up two USB keyboards and the joystick to the one computer (not seen) and projected the image on a large screen.

Projecting Software in Worship...

Many churches are already projecting portions of software in Children's Worship. And it has begun to creep into adult worship too. A pastor told me he was preparing to project the Christmas scenes from a favorite program for a special children's sermon he was developing. Next year that same pastor used the spectacular "photobubbles" from the Ten Commandments CD as backdrops for a sermon series he was preaching on the Commandments. The pastor muted the sound and activities in that CD and used only the images. My own pastor saw our 3D Bible Atlas and remarked "that would have made a great introduction to last week's sermon."

In many churches, multimedia is gaining ground in adult worship. Worship slides and graphics are already available. And a few daring worship leaders have taken note of the animation, video and rich illustrations found in a number of Christian education CDs and are excerpting them for worship use.

As mentioned earlier, **projecting software for Children's Church or Youth Events** is gaining in popularity. Projectors have become a lot less expensive and a lot more portable. You can project individual scenes and graphics from just about any software program. Suppose for example, you are leading a youth event and want to run a music video or some animation as a "prelude." You could pick the "O Father Abraham" or "Insane Fanat-asy" music videos that are tucked away in the Abraham & Sarah CD, or one of the music videos from Actual Reality CD. They are very cool for youth to ponder. If you are leading an Advent series in Children's Worship/Church, you could use scenes from Fluffy & God's Amazing Christmas CD to provide a backdrop, or use one of the animations as a think piece as children arrive.

Surfing the Internet as a classroom activity...

Every year I really expect to see more and better Christian content for children available on the internet. But for most of us who have looked, **it's just not there**, yet. What is found are some simple Bible quizzes, and some innocuous Bible themed games "not quite" about the content. There are some flash presentations from evangelizing groups, but nothing approaching a "multimedia lesson delivered over the internet".

What content does exist on the internet for Christian education is usually of poor quality and often not theologically mainstream. A few persons have created online storybooks, but these are heavily text based and

their graphic content is usually little or none. What you can find are free lesson plans to download, and websites like my own which give away teaching resources and articles.

A few churches use the internet to help kids learn about mission or other parts of the world. Some have their students email missionaries from time to time. Some churches, including one of my own, have made attempts at building a webpage as part of a lesson. The general consensus, however, is that we end up sacrificing too much class time on “teaching and using the tools” rather than focusing on the content.

Reasons to install internet access in your lab...

Many churches install internet access in their labs because they use their computers with adult groups, seniors, and job-retraining mission projects. But they do not necessarily open that access to their Sunday School.

If your computers will be used for After-School or Tutoring programs, then you’ll want internet access so that students can access Homework Help and school work research sites.

In the chapter on Hardware, I suggested that **IF you are putting in new computers, you should install internet access in the lab.** Newer Windows operating systems EXPECT access to the internet so that they can update themselves and fix problems. And also, there are software program updates, tech support pages, and downloadable teaching materials that a teacher on Sunday morning will appreciate having access to.

Far Out Ideas...

I remember when even talking about computers in the church was a far-out idea. *Where’s the edge now?* What else could we be doing with broadband internet access and computers? How about hooking up a videocamera to a laptop and beaming your church service to any homebound members with a computer? Seems far-out, but it’s entirely easy to do and not very expensive. You probably have some teens who could set it up for you.

What else? How about a laptop and projector in Fellowship Hall to highlight a mission website, or to show off the new message board at the church’s website? What about email Bible studies and prayer chains?

What about virtual meetings? Seems “out there” but if ask around your congregation you may run into business people in your congregation who already do it regularly. How could a member of your church council participate in a meeting if she was home on crutches, or couldn’t drive?



Pictured above: A seminary class I “virtually” participated in two years ago. What new ways communicating and teaching will technology help us imagine? How can we reach out to homebound students? How can the internet be used to bring members into the mission field? These and many more experiments are being conducted in churches. If you have done something innovative along these lines, contact me and we’ll share it.

Chapter 12: The Top Ten Most Common Mistakes

This list of common computer lab mistakes has been at our website since 1997. People are still making them, and the advice and solutions continue to prove correct. My best advice has always been “learn from our mistakes, don’t repeat them.”

1. Too many kids, not enough computers.

Enthusiasm can turn into chaos with too many kids. The answer may be to control the number of kids, not rush out and buy more computers. How many kids per computer? “2.5”

2. Too much money, too many computers, and not enough of everything else that’s important.

It’s amazing how many labs tell me that their SOLO lab teacher had problems teaching with a program which they have installed on all 6 (or 8 or 12) of their computers. An extra teacher and a teen or two can make or break your lab.

As computers have become more affordable, as more software has come out for Sunday School, and as the idea of teaching with computers becomes more widely known, more churches have begun teaching with software unprepared and overwhelmed. Fools rush in with money, no experience, and untrained teachers.

2a. Too many teachers? ...nope, you can’t have too many teachers.

You’ve got 40-50 minutes a week at best in the average Sunday School. Maximize it.

2b. Too many computers and not enough kids.

Believe it or not, there are churches who get used equipment (or new) by the truckload, or buy their computers thinking “one computer per kid” -only to discover later they didn’t need all the equipment, (and that bigger labs require more teachers and bigger software budgets). Then they wonder why no sane teacher will set foot in such a lab -where the computers are lined up all in a row and the kids all have headphones on. Get your numbers right.

3. Believing this is easy, and settling for “happy”

You can’t just turn on software and expect learning to happen. Yet, many NEWBIES think it’s just that easy. They rush into creating a lab expecting the software to do their teaching work for them, and satisfied with seeing the kids happy.

Yes, the kids will be happy to plow through your software (and miss half its content doing so), and they’ll look forward to the lab the next time, and the next. **But “happy” isn’t what we’re after with computers**, it’s merely where we begin. We’re after teacher-student sharing & reflection (ie, faith-building). That happens AS you go through the software with your kids, -not when you sit back and watch.

Corollary: Some churches think teaching with computer requires people with computer skills instead of teaching skills. But once the software starts up, it’s all about teaching, not about “tech-ing.” *It is easier to show a teacher the necessary technical ropes, than it is to show a techie how to teach!*

4. Mis-judging software before trying it out in the classroom.

Not reading the Teaching Guides about the software.

You should immediately assume that most children’s software is *not* built to appeal to *you*. It’s about what *they* will enjoy and learn from. We test each program with real kids. More than once I’ve been surprised by what my students liked or grabbed onto in a program. And because I’m right at their side when that moment arrives, I can teach with it. Another issue: adults tend not to like or see the value in computer “games”. Many didn’t grow up playing computer games or are easily flummoxed by them. This is where a teen helper comes in handy!

Quite often, the difference between “*happy kids at the computer,*” and “*happy kids who are learning at the computer*” is what the TEACHER brings to the lesson. (Yet, if you have a lousy lab set-up, such as, a lab that’s too noisy and has poor acoustics, it can undermine the teacher’s effort in a heartbeat.)

5. Putting your computers too close together.

When you stack computers too close together, the music, sound effects and narration wash over each other and *create cacophony*. It’s particularly bad for the teacher who is sitting equi-distant between the pair of computers they are working with. Start with an adequately sized room and place computer about 5 feet apart with dividers between them.

If you stick headphones on your kids, it’s because either, a) you aren’t really teaching them anyway; or b) you have nothing to say to them and they couldn’t hear you if you did; or c) you have left for coffee; or d) you need a bigger space and dividers between computers but didn’t ask.

6. Not having enough software, and not being able to choose the right software for the lesson.

I continue to hear from well-meaning but ignorant people who expect us to have *one* program that will teach all their stories. And I regularly hear from churches that don’t have the money to get software that matches their upcoming lessons -because they have too many computers.

Then there are those who are “surprised” that they can’t copy one program to all their computers. A few years ago it was possible to mis-understand this. But here in the 21st Century everyone should know that *copying is pirating*.

7. Using the same old software til they groan.

This is the result of #6 above. Wordprocessing to create a “newsletter about the story” works about once a year. Some churches overuse certain programs like Kid Pix. Your kids will get frustrated with you.

8. Not having a lesson plan and not being prepared.

If you’re not previewing, preparing and going into class with a lesson plan, PLEASE let somebody else teach.

9. Thinking those eight year old donated computers are fantastic!

Well, they are fantastic—compared to nothing. But the screaming fact is that you can’t teach with the screen-saver. You teach with the software. And if your computers can’t run MOST of the Christian software available today, then that’s a problem.

10. Too Many Good Computers (!)

I know it sounds unbelievable, but I regularly encounter churches who get TOO MANY COMPUTERS—good ones too. Some business gives them a room full, or some member writes them a big check. And the church ends up with more computers than they can properly manage or have room for. And they can’t afford all the software they really need. Then the computers crowd the room -which then creates a noise problem. And now your real teachers want nothing to do with the lab. The solution is simple: only install or turn on as many computers as you can adequately support with good software and good teachers.



Tech & Hardware Appendix

Tips on Buying New Computers for your Lab
Common Technical Problems Solved
How to determine your computer's specs
About Quicktime
What you need to know about Videocards and Graphic Chips

Tips on Buying New Computers for your Lab

You'll most likely get a lot of advice about buying new computers for your church so I'll keep this brief. Here are my tried and true tips for buying lab computers:

1. Be careful of buying *too many* computers. More computers will require more software and more teachers. Most churches have found that it's easy to add one more computer at a later time if needed.
2. Stick with a major, dependable brand, such as Dell or HP. Stay away from the bargain basement store brands and catalog deals. Don't be penny-wise and pound foolish.
3. Be sure your computer has a CD/DVD player. Some newer ones don't come with them.
4. How powerful does your computer need to be? As a benchmark, look at the basic budget PC which Dell is selling right now, and buy the one just above that basic offering. That computer will likely last you 8 to 9 years in your computer lab before it's time to replace it. You don't need "the latest-greatest."
5. Pay attention to the size of the screen. You'll be having 2 or 3 kids plus a teacher at each. 17" minimum.
6. In general, laptops cost more, don't last as long, break more often, and their screens can't be viewed from the side or from a distance like you can with a typical desktop flatscreen monitor.
7. Don't forget to put good surge protectors on all your equipment! (not merely powerstrips)

Common Technical Issues SOLVED at www.sundaysoftware.com/support

We have a huge support area for our software and are willing to walk you through it. The truth about all software and hardware is that sometimes they don't get along. Sunday Software's online support page should be the first place you go when you have a program from us that has a problem on your computer. We also have several tech articles that explain & solve common problems, such as:

- Tweaks for running older software on newer systems, or newer software on older systems.
- "Virtual Memory" error messages on XP with 1 gigabyte or more of memory.
- Animations/Video that are running slow, choppy, look odd or distorted.
- DDraw.dll and other videocard and 3-D Program problems.
- "Program has performed illegal operation."

How to Determine Your Computer's Capabilities

To find out what your computer's specs are, in Windows click START (Pearl), PROGRAMS, RUN, then type the six letters "**dxdiag**" in the run field and press Enter. This will start DirectX Diagnostics. Then click the "save all information" button, or view the info under the System and Display tabs.

An Important Tech Note about “Quicktime” (You Need to Read This)

Quicktime is a program that comes with MOST multimedia Christian CDs. It is also the source of many technical questions from our customers. Quicktime is a popular utility used by software programs to present animations, sounds and videos on your screen. *You need* Quicktime for many of our programs. Quicktime comes in both a Windows and a Mac version and is FREE.

Quicktime has fallen out of favor with web developers due to security holes. However, **you still need it** to run resident software on your harddrive. See our Quicktime Notes on Sunday Software’s Support page.

Things you need to know about Quicktime:

1. There are many different versions of Quicktime. They came out with a new version about every 15 months. You may end up with 2 or 3 versions on your computer.
2. Quicktime is free from Apple’s site and other places on the web.
3. Quicktime usually comes on the CD you have purchased and you will be prompted to install it during the program’s installation. HOWEVER, many older programs have older versions of Quicktime which you will not need to install because you have installed the latest best version per our urging!
4. Some very good older software programs were made to use Quicktime 2.x. They will not work with more recent versions of Quicktime. Version 2.x was in its own universe, and a lot of great early Christian multimedia titles need it installed on your system, --and you can have multiple versions installed. Consult each program’s free teaching guide for tips on making sure your older program’s Quicktime animations will run.
5. When installing Quicktime, if it asks you to “search and delete earlier versions of Quicktime” always say “no.” We have never experienced a problem adding a new version and keeping the older version.
6. Video/Animation technology is changing rapidly for the better. If you are connected to the internet, I recommend you always download the very latest copy of Quicktime from www.quicktime.com
7. Quicktime installs icons in your Control Panel and you can make adjustments to it from there (and sometimes need to...see our support page if you run into problems with sound/animations).

If you encounter any problems with videos, animations or sounds –or any other problem with a program in our catalog, check support page at www.sundaysoftware.com/support.

How to manually install an Quicktime from an older CD that comes with it.

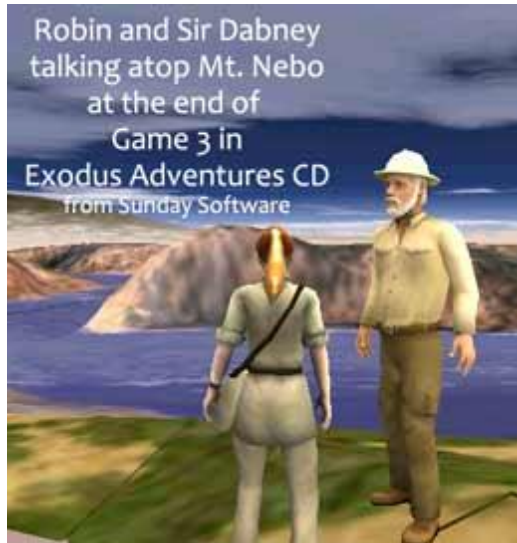
1. Use Windows Explorer (My Computer) to view the files on the CD.
2. Look for a Quicktime Folder, or a file by the name of qt32.exe, or qtinstaller.exe, or something similar. Double click that file to install it.

Videocards and Graphic Chips ~ A Common Hardware Issue

It is not uncommon for a church to discover that the old computers they were given have outdated or underpowered videocards or videochips. If you need more details go to the ARTICLES section of www.sundaysoftware.com and read my article about videocards.

None of the Christian software available today needs an expensive videocard. But if your computer is older than 8 years old, it may need to have an inexpensive 3-D accelerated videocards added (\$50).

Sometimes even new computers need their video “driver” updated to address a problem. These small files are free to download from your computer manufacturer’s website or video chip/card maker. Always go to the manufacturer’s website after you get the new or used computer to see what updates they have.



Sunday Software

We make coming to church and learning scripture fun!

Cal & Marty's Scripture Memory Game CD

Put Cal & Marty's Scripture Memory Game CD on your laptop this summer and help your students REMEMBER all those scripture verses you taught them! Cal & Marty comes with a sense of humor, AND a Verse Editor so you or your students can put in all the verses you want, in the translation you prefer.

Cal likes to help (and joke around)

Bonus Content

Score Tracking

Go!

Cal & Marty's History Lesson

- What is the Reformation?
- What is a Profession?
- Four Protestant Ideas
- Did Cal & Marty ever meet?
- About me: Martin Luther
- About me: John Calvin

www.sundaysoftware.com/luther-calvin

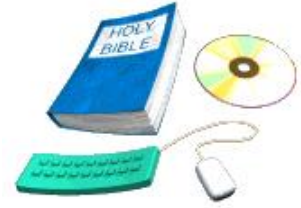
On the following pages you'll find a printable copy of our Teacher Training Pamphlet. This document is also available as a editable Word document at our website, www.sundaysoftware.com/articles

Teaching with Software

A pamphlet for our volunteers

printed from the book Teaching with Computers in Christian Education

by Neil MacQueen, www.sundaysoftware.com



Thank you for teaching the children! Your guiding presence and love for God’s Word is an important part of their faith journey. Our teaching methods include computers because they are exciting to this generation. They command the kids’ attention, present important content in a memorable way, ...and give them a desire to come back for more.

The attraction also creates a challenge for you the teacher. Unlike some other teaching methods, the kids will be eager to get into the software and want to quickly push through it to see all there is to see. And unlike some other learning activities, the kids’ attention will be focused on the screen, and not the teacher. This is why you will need to create some extra structure and expectations in your software lesson. And you will need to become the “guide by the side” when using the software.

Structure and Expectations

When your students first come in, have them come to the discussion table rather than sit at the computers. Have the computers turned on, but turn the monitors *off* because even a screen saver can be a distraction to the students. They will immediately want to know “what program” they are using today, so write it down on the board. Over time, these habits and expectations will improve their experience and yours.

Guide by the Side

Rather than standing back and watching, we want you to sit down at the computers with your students as much as you are able, --and go through the software *with them*.

This will accomplish a couple of things:

1. Your presence will settle them down and let each child know their needs will be met (such as “getting their turn” at the keyboard).
2. You can help pace them through the software, rather than letting them rush through.
3. You can point things out, make comments along the way, and stop for discussion. (Without you, kids will naturally try to bypass some content.) You’ll also be able to hear and respond to their comments as well.
4. A guide by the side can help younger children navigate and read onscreen texts. This will allow you to extend many of your software choices ‘down’ to the younger grades.
5. Your proximity to the volume button will help keep each computer’s sound from spraying over onto other computers.



Depending on how many computers and students you have, you may need extra volunteers to help you. Most teachers have found that they can cover 2 to 3 kids per computer at 2 computers. In order to bring additional volunteers quickly up to speed, make sure you do a thorough introduction at the beginning of the lesson, highlighting key concepts, key questions to wrestle with, and key parts of the program to spend time on.

Many teachers also create a worksheet for students (and teachers) to follow at each computer. The worksheet usually includes instructions and questions to answer, -holding students accountable for paying attention, and giving them something to share back at the discussion table. Some programs have ready-made worksheets available at www.sundaysoftware.com.

How Software Fits in a Lesson Plan

Your software is a component in a lesson plan, not a replacement for one, or for you! You'll still be welcoming and fellowshipping with your students, engaging in Bible study and discussion, perhaps including other learning activities, and reflecting and praying with them.



Some programs have all the components of a good Bible lesson: - Opening questions,- Encountering the Scripture, -Digging into the scripture, -Reflection with Life Application. These programs require more time at the computer . Others programs will only give you activities for part of your overall lesson plan.

Some lesson-style programs look and play like games and others like interactive books.

The length of time you spend in a program will vary depending on the program you are using. With some software you may only be at the computer for 10 or 15 minutes. With other software, you may be at the computer almost the entire lesson. For these lengthy programs, be sure to plan plenty of time at the computer.

Some programs have activities in them that fit into a specific part of your overall lesson plan. Such programs may only offer a short story presentation –which would be used as part of your Bible study with your students. Or they may offer a puzzle or quiz activity for use after your study. In some cases, the software may simply provide a content-related game for students to play near the end of your lesson. Know your software and read its teacher's guide.

There are times when you might be using two programs in combination –viewing story content in one, and following up on that content with a puzzle, quiz or reflection activity in another.

Depending on your lesson needs and the software you have, you may address the class as a whole throughout their software use (example: “I’d like everyone to pause for a moment and look over here”) or you may simply provide direction and some time-keeping help to your helpers throughout the lesson while they are at the computers (a “tip” sheet or “talking points” sheet for the volunteers is often appreciated). After using the software, you will mostly likely bring everyone back together around a discussion table for some Q & A and reflection. Because the kids would rather “play at the computer” it’s important to be consistent about these expectations and reinforce them at the beginning of each lesson.

Getting the Materials

- Check to see that you have the proper software and the correct number of CDs for the computers you will use. Please obey copyright laws and only use the software on as many computers as we have paid for.
- Print the additional software teaching materials from www.sundaysoftware.com. Look on the CD's webpage description for the links to the documents.
- Look at the guides and technical tips for your software so that you are aware of any potential problems and can quickly solve them. www.sundaysoftware.com/tips and www.sundaysoftware.com/support

Preparation & Previewing

- Read the lesson, Bible story, and background materials.
- Test the software ahead of time on each computer where you will be teaching. This is especially important if you have different types of computers.
- Go through the program with its guide in hand. Highlight portions to focus on or skip.
- Be aware of how long it takes to complete certain software activities, and make sure you plan enough time for them at the computers during your lesson.
- Consider age appropriate adjustments –many of which are suggested in the online outlines.

Beginning the Lesson Plan

- **At the beginning of every lesson**, tell the students what you hope they'll learn today. Don't save it until the last 5 minutes of class. (And tell them *why* it's an important lesson to you and to their faith.)
- **Outline the lesson plan** on the board from start to finish. Label each step with how much time they will be spending in there. This will give your students a sense of structure and expectations, and it will help your other volunteers get up to speed.
- **Write out the software's key points, content and instructions** on the board: "Here are the sections in the program we will be looking at, here's what to do when you get to this point, and here's what I want you to skip." By writing it down for everyone to see, you'll not only help your students and volunteers, it will be a good refresher and guide to you as well.

Neil* writes: *"Of all the advice I've given about teaching with software over the years, I can't stress these 'beginning steps' enough. They put the students, volunteers and me(!) at ease with clear expectations."*

Closing for the Day

1. Check the CD drives and put away the software.
2. Shut down the computers using the operating system's shut down method.
3. Check to make sure the monitors and speakers are turned off.
4. Remember to turn off the lights and lock the door behind you (if needed).

In Conclusion

Yes, this *is* more involved than teaching with popsicle stick crafts or watching a DVD! ...but we are also hoping for better results. The kids will be ecstatic about your lesson and want to come back for more. If you have any software and lesson questions, check with our contacts listed below, or email Neil@sundaysoftware.com

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Your Teaching and Tech Support Contact is:

Name: _____ Phone: _____ Email: _____