

Everett Labs – Lesson 7: Teaching Technology

The lessons learned so far are not top secret, they are to be shared with team members and others to foster productive project environments. This class will focus on tips and strategies that allow for a more effective, understandable transfer of technological skills.

Homework

- [Submit HW](#)

Outcomes for this lesson:

Learn to not be a tech bully!

Introduction

There is a thing that happens in organizations when technical skills are involved: it's easy for some people to lord their knowledge over others and use it as a tool to gain power over others. If you've ever been to a mechanic, you may have encountered this. People with technical knowledge have an advantage over those who do not. This can cause a lot of problems in a non-profit.

Nick Burns, Your Company's Computer Guy



Why this lesson could apply to you

Why This Lesson Could Apply to You

Have you guys ever been in an instance when you needed to help a friend with a computer problem? Or maybe you needed to teach some sort of technology for a job or project?

Well if that instance has ever occurred or might occur, then when you are writing the lesson plan somethings need to be considered.

You wouldn't want to be seen like the tech guy in the SNL skit, right?

Example of a Perfect Lesson

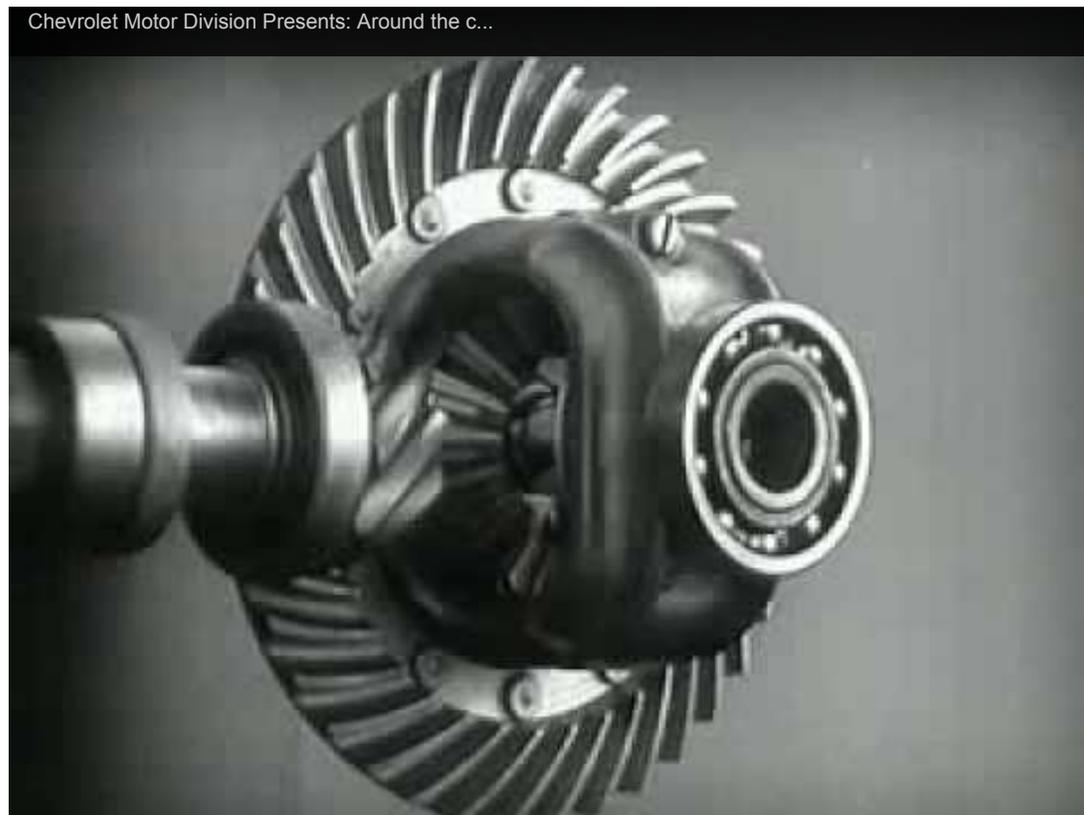


Example of a perfect lesson

Well, other than the lessons we give . . . 😊

I found this a while back and was amazed at its simple brilliance: it's a video explaining how a differential gear works.

Just watch and we'll discuss why this is such a great video and what you can learn from it (other than how a differential gear works)!



Why This is an Awesome Lesson

The film starts by giving you several examples that demonstrate how two wheels spin at different speeds and why that's important. It then shows us the apparatus and begins working through how to solve the problem.

At no point does the film ever assume that the viewer knows something. Every bit of information that is required to understand what's going on is supplied as it becomes important. This is an ethic that you would do well to emulate.

Why do you y'all think it is great lesson?

How to....

Choose tech tool(s)

Someone has approached you to solve a problem, since you are THE expert on tech, and you decide that technology is the best solution for the problem. Once you have reached this point, you can choose the tech tool(s) that you think fits best!

Choosing tech tool(s)

Say someone wants to know what a good note taking app is. Well exercise your Google-Fu and start with a search. I searched for "best note taking tools" and immediately got a list from Lifehacker called Five **Best Note-Taking Tools**. Also I found **Ask the Entrepreneurs: 9 Best Note Taking Tools**. I also went to Appstorm.net and searched for note taking apps and found a bunch more

Some of the ones that came highly recommended were

- **Evernote**
- **OneNote from Microsoft**
- Pencil and Paper (not an app lol)
- **Simplenote**
- **Notational Velocity**

That's really the secret to finding new tech. You ask around, either robots or humans, and then test out the apps. Download and play around for 20 minutes or so and see what you like. If something seems immediately intuitive and has good documentation, you've found yourself a good app. Congratulations!

Alternate Method

Ask one of the Everett Fellows! They love talking tech and they absolutely love helping out students. Don't be shy!

Questions to answer when your tech tool is chosen

Question to Answer When You Have Chosen Your Tech Tool

Whenever you are going to teach something something you need to ask yourself some questions:

- **What do your pupils know?**
- **What am I trying to teach?**
- **What are the exact things in between what they know and what I want to teach?**

You need to ask yourself these questions **all the time**.

If you don't, then you are **making an assumption** about your subject and if your assumption is wrong, **it may make a lesson useless**.

Preparing a lesson

 **Case Study**

Companion Post

This section of the lesson deals with what went into writing the post found [here](#). It deals with the app called Alfred. Have it open in another window so you can reference it.

Setting Goals

Before you start writing, you need to plan what you're going to say. Start by listing out the goals of the lesson you're writing. That is to say, what do you want your readers to be able to do at the end of it? What is the most important stuff for them to know to get up and running? Here are the goals for the Alfred lesson:

1. Understand what Alfred is
2. Understand why they should use Alfred
3. Have the settings configured for optimal use
4. Understand how to search for files
5. Understand how to use web search
6. Understand how to create custom web searches
7. Provide Alternatives

These goals are the guiding ideas behind the post. If I write a whole lesson on this tech tool and at the end can look down this list and say, "Yes. All that stuff happened", then I've made a good lesson.

Goals can be checked to get you back on track when you lose your way. Always begin a lesson -any project really- by listing your goals.

With these goals in mind, we can get to writing.

Explain What It Is

Very first thing you do should be to summarize what a tool/app does. Is it a productivity tool? Does it manage your email? This doesn't need to be long. Feel free to steal from the app's website. Do this and Goal 1 is taken care of.

Explain Why They Should Care

Look at the lesson to see the description of **why this is a useful thing to know**. Realize, that we write these at the beginning of each lab lesson...

Goal 2 is donezo.

Deciding Where To Start

Always examine your assumptions, because when you assume you make an ass out of u and me. Where you decide to start a tutorial relies on some assumptions about the need for your audience to be directed. We can all assume that the user doesn't need to be told to turn on their computer or to continue breathing throughout the lesson.

Do they need to be walked through how to install the app? Unless there are special steps, I would argue that they don't. All that explaining how to install your run-of-the-mill app would accomplish is to expand the size of the lesson and make it more jumbled. For Alfred, all anyone needs is to be directed to where they can find the download link. The actual lesson can then begin with the assumption that they've installed the app and are eager to know how to use it.

For that reason, the lesson only contains a short line about **installing Alfred**.

Notice that I didn't include this as a goal. It's not something that you can really do anything without, so why include it. Same reason we didn't start with telling them to turn on their computer.

The Lesson Proper

Part I: Getting Set Up

Now that they've got it installed, what's the first thing to have them do? Well it depends on what you're teaching. I think a good rule of thumb is to begin with essential settings before diving into nifty functionality. If you were explaining Skitch, an essential setting would be to link it to your Evernote account. If you were writing a tutorial on Cyberduck, an FTP client, you would begin by having them configure the settings which allowed the proper text editor to be used.

The question to ask yourself is, "What do they need to know to get this thing working correctly so that all the functions will...function the way I want them too." If you're teaching a tool that you use, look at the settings you use and think back on why you put them that way.

So what are the essential settings? Well you need to be able to access Alfred quickly, and you need to make sure that it's searching for the right stuff on your computer. I'll then write a new section called "Getting Set Up" and put three sub sections within it called "**Changing the Hotkey**", "**Setting Search Scope**", and "**Setting File Types**"

Oh look, I've satisfied Goal 3.

Part II: The Lesson

What To Put In

Decide what features and how many of them you want to teach. Some things to consider when choosing:

Don't Go Overboard

Unless an app is super simple, you're not going to be able to hit all the features. That's what their documentation is for. You're writing this because somebody trusts you and will listen to this tiny training that you're giving them. You're going to get them up and running and past the starting out hump.

How representative of the tool is it?

You wouldn't tell someone about the Etherpad and then spend the whole lesson telling them how to use formatting would you? You're here to sell the user on an app, so try and go for something that really showcases what it does.

Understand the prerequisites

More complex apps will have functions built on functions. Let's say you were writing a tutorial on Evernote. If you wanted to write about making notebook stacks, you would first need to explain what a notebook was. For that matter,

you'd need to explain what a note was! Systems are built upon systems.

Following in that same vein, make sure that your lesson is written in the correct order.

What Went In

Having asked myself these questions, I decided that the features to include would be **File Search** and **Web Search**. Why?

- I felt two was a manageable number of features to throw at the user. There are way more, but are technical and only make sense once you're comfortable with the app
- They capture what Alfred is about: "Using the keyboard to do things fast rather than slogging through the GUI". The user can extract a great amount of value just from these things
- They don't require any specialized knowledge aside from what we configured in the settings section

Having wisely chosen and written them up, I satisfied Goals 4 through 6.

Part III: The Wrap Up

Summarize

Self-explanatory.

Providing Alternatives

There is a wonderful site called [alternativeTo](#) which catalogues all the apps that are like other apps but are free. I highly recommend checking it out to find free alternatives to paid apps. I supply a link to the page cataloguing alternatives to Alfred and with that I've completed Goal 7 and can sit back.

5 Making Tech Homework

Homework is tough sometimes. You need to balance out the need for creativity with the need for objective outcomes and guidelines. It's a fine line and no one gets it 100% right but you can get close.

Refer Back to What You Taught

Think back to the Alfred tutorial. What did it teach? Well according to the goals, they learned how to search their computer, search the web, and create custom searches. Why not start there?

Searching for Files

You could have them do this, but you have to think about how you can actually make that into a task. Telling someone to "search some files" isn't the most challenging thing and it's hard to ask for proof that they did it. So if I were making an assignment, I wouldn't include this.

Setting the Search Scope

Now that's something they could do. As the tutorial state, this is a crucial thing so it's totally useful to assign them to set the search scope to particular folders. Let's say, Applications and documents. As proof, they can -and I know you know what's coming- take a screenshot!

Web Searches

This one is a no brainer. This is one of the things they learned to do, so it's only logical to ask them to create some custom searches. Assign 3 websites for which to make searches. You can ask that they prove this by taking a screenshot

of the completed custom search query box and supply the search URL. That's them putting the lesson to use and the search URL itself can be shared with others!

Limitations

I believe that's the end of the obvious functionality of the free version of Alfred. The full version is about \$35 for 2 licenses. More than worth it to me, but not fair to expect students to pay. So how can we extend the assignment? The answer comes in the end of the tutorial when we linked free alternatives to Alfred.

Students Can Add Value to a Course

Require students to download one of the free alternatives, play around with it, and write walkthroughs on a couple of the features. This is beneficial to all parties. The students learn about a tool/app and the content they write can be used as teaching material for other students like as with the custom searches in the other par of the assignment.

We think that the best kind of assignment will incorporate ways for students to share what they've learned with each other. Someone who completes this assignment may become a **Quicksilver** devotee and share that with others. Then everyone will be more productive and happy!

Teaching Technology to . . .

Middle Schoolers

These are 12-14 year olds...

What Tactics Would You Use?

- See how much they know
- What they think it can be used for
- Keep it simple
- Make it relevant
- Make it interactive- walk around, touch all learning styles: visual, audible, written, etc.
- Make it fun!
- Make a PowerPoint, apply the tech tool, and have fun!

High Schoolers

What Tactics Would You Use?

These are 15-18 year olds...

- Brainstorm what can go on a resume
- Prioritize their interests -> go to careers
- Think about college and other school-type paths
- List their interest, volunteer experience
- Parallel it to other social media site -> so they don't feel estranged
- How this will be beneficial for them
- Know the technology you are teaching
- Start with complete and cool uses of a tool and then go the basics

College Students

What Tactics Would You Use?

This is for people your age! :)

- Homework assignments directly relate to the topic just taught
- Show how to use the tools in other situations (classes, clubs, orgs, etc.)
- Show tools that will aid them in their search
- Use Skype, Prezi, Doodl, etc.
- Tools that are versatile and serve multiple purposes are great!
- Tools that work well for resumes and for specific careers
- Leadership tools and organizational management tools are awesome skills to have!

Parents

What Tactics Would You Use?

If you guy were teaching your parents (adults middle-aged, 40-55 years old), how would you do so?

- Explain over the phone- describe it to a dot and t: cover all the detail like you don't even think need to be there
- Mention the direction on the computer screen and where to go
- Do it in front of you, if your in the same location
- Have them go over as much as they can, then teach
- Repetition and practice technique frequently
- Teach the in-between technology
- Apply the similar concepts from other tech
- Use transition words
- Teach short-cuts
- Adapt to the style that is most familiar to them
- **BE PATIENT (for all age categories) but parents and older people more so!**
- Connect the tech through their occupation/experience
- Have them use tools that are familiar with
- Maybe connect it with the new tech

Our tips on teaching technology!

When Planning the Lesson

When Planning the Lesson

- Know the main terms used to operate the technology and/or tech tool
- Then in the lesson plan what the term means or don't even reference the term at all (use everyday terms)
- Writing a tech lesson has similar structure:
 - title, introduction to the material, why it is important to those you are teaching, explain terminology that your pupils may not know, how to set up and start using the technology, possible pros and cons, the etiquette of the technology, and your personal suggestions (from experience) on how to use the technology
- Be selective and careful when choosing the technology you want to teach, how you want to teach it, and how you want to present it
- You have the choice to offer them the best option that is most pertinent and helpful to them or the alternatives so they can make the decision on what tools they want to use.
 - Which ones you choose is your choice!
 - Just make sure you are proficient to an expert on these tools, ya gotta be able answer of the students inquisitive questions.

When Creating Teaching Aides

When Creating Teaching Aides

Create a **handout or presentation** for the students to follow along.

These are helpful in engaging their attention at the time and a useful tool for the future!

When creating the teaching aids (handouts and presentations) write it with your students in mind:

- Write specific content that is related to those you are teaching and the technology that you are teaching.
- Provide examples and use terminology that your listeners can understand.
- Don't assume that your students know certain things.

When teaching the lesson

When Teaching the Lesson

When speaking engage them *verbally, visually, and mentally*

This can be done by speaking in a fluctuating voice, making eye contact, creating presentation and handouts to aide the presentation, and ask questions along the way.

These questions can be gauging questions to see how much your students are understanding your lecture, a way to engage your audience, and even see what types of teaching style (tone, presentations style, stance, layout of content, joke, or even story).

This shows that you really want to work with your students and that you are putting time in for them!

When teaching technology, take time to help them set up an account or install an app. Walk around the room and help those who look confused. Body language says a lot!!!

Tips for Presentaions

Project and Resource Managment

Homework Assignment

In this assignment you are going to plan and prepare a lesson on one tech tool of your choice that has NOT been taught to y'all this quarter!

Please put your name and tech tool on this [etherpad!](#)

Choosing you tech tool(No overlapping with others!):

- Choose a tech tool that you use and want every one in the class to learn about!
 - The tool must meet these requirements:
 - it is either an application online, for the a tablet, computer, or mobile
 - it has NOT been taught to y'all in class this quarter

Create a lesson plan to teach the tech tool!

Once you choose your tech tool, create a lesson plan on teaching this tech tool to a group of college students!

Here is an example bare bones outline **TE fall 2014 lesson 7 plan** I have done for this class! DO NOT submit that bare bones of an outline, fill in each section with the final information (ALL THE DETAILS) for this homework!!!

When doing this I want the following to be submitted

- A well written, clear, and organized lesson plan with:
 - bullets
 - colored titles differentiating between general topics and specifics within the topics
 - bold and italicization when importance needed to be clearly seen
 - written out in the order you plan on teaching the tech tool
- In the lesson plan's content have these items FILLED OUT:
 - a written explanation of what the tech tool is
 - a written section on ways your students can use the tech tool
 - a written section on ways you have used the tech tool
 - a written section on why you think it is important
 - a written section on what devices and softwares it is compatible with!
- Way to access the tool:
 - IF the tool need to be downloaded/signed up for:
 - write out the step by step process on how to download/signup for the tech tool
 - include skitch shots of each important step with arrows and sensitive information blurred out when needed
 - IF the tool is online link:
 - show how to get there and hyperlink it on to the link
 - include skitch shots of each important step with arrows and sensitive information blurred out when needed
 - a written section with skitchshots/images showing the features of the tech tool
 - be sure to include information on how to use the features
- If you have extra resources and links that the students would find useful to look at afterwards, create a hyperlinked section of these links &/or documents
 - this is NOT NECESSARY, include if it will help your students

Items to submit!

A written document call '*Insert Name of tech tool here Lesson Plan*' with all the following requirements above. **SUBMIT IT IN A PDF FORMAT!** [in document when you are saving, on the drop down panel select pdf, not .doc or .docx!]

ex. 'Skitch Lesson Plan'

Label it: FirstName.LastName.LessonPlan.doc ex. Aaron.Longa.LessonPlan.pdf

DUE DATE: Enjoy your thanksgiving day and turn in the homework by **6pm on friday the 28th!**

Submit Homework