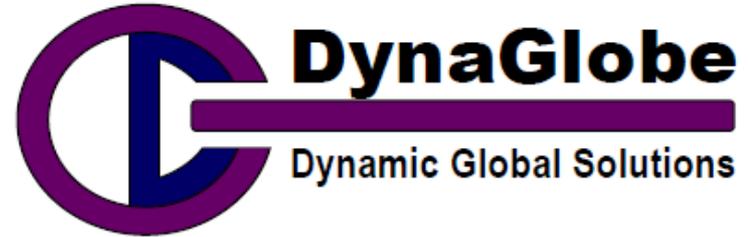


# INSIDER SECRETS TO EFFECTIVE DOCUMENTATION



A Brief Introduction to the Glamorous  
and Exciting World of Technical Documents

# Meet and Greet



- ▶ Hi! I'm Kerry Ballew
- ▶ I own DynaGlobe LLC
- ▶ Please feel free to e-mail me at [kerry.ballew@dynaglobe.us](mailto:kerry.ballew@dynaglobe.us) or call me at 740-858-3282
  
- ▶ Now turn to two other people and greet them like they're the most important person in the world!
  - That's how you should act toward your document audience....

# Your Document's True Purpose

- ▶ To tip the odds of success in your favor:
  - Stakeholder buy-in
  - Process improvement, optimization, waste reduction
  - Increase in knowledge (via research, communication)
  - Record of work performed
  - Summary of conclusions drawn
  - Validation of work and business methods
  - Training material
  - Traceable requirements flowdown
  - Increased award fees & new work won

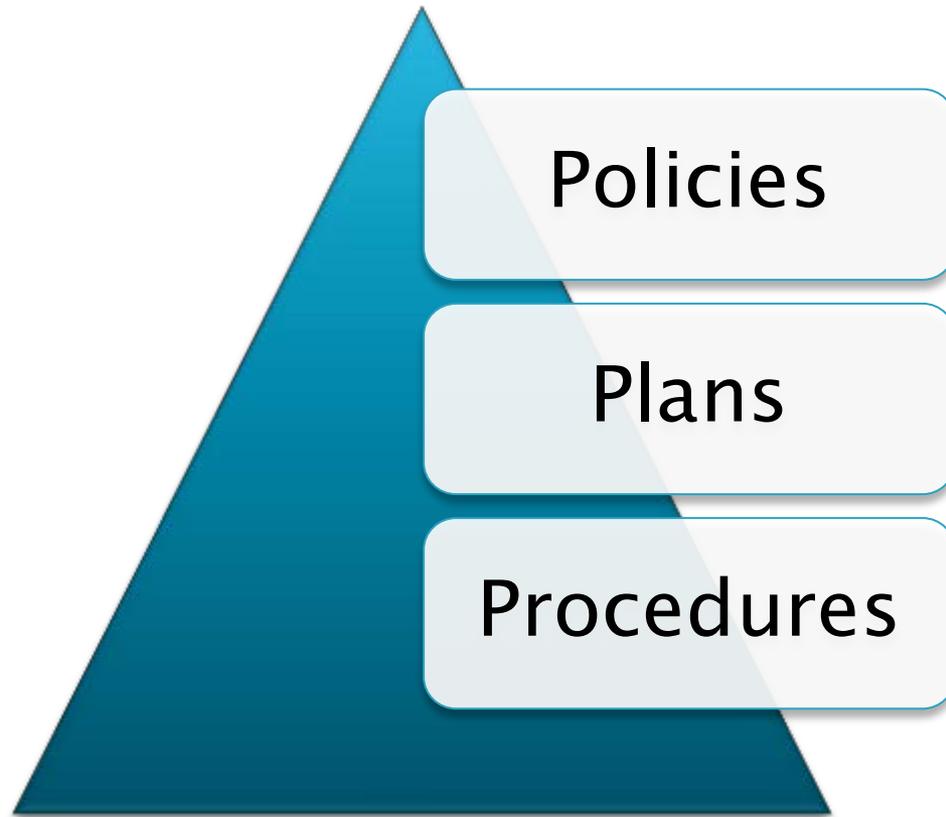


# Document Types



- ▶ Policy (expectations)
- ▶ Plan (goals, methods)
- ▶ Procedure, work package—  
what to do, and how
- ▶ Guidance document (manual, guide)—overview
- ▶ Informative document (report, study, white  
paper)—data and analyses
- ▶ Bus. dev. document (proposal, corporate  
capabilities, resume)—sales

# Document Hierarchy

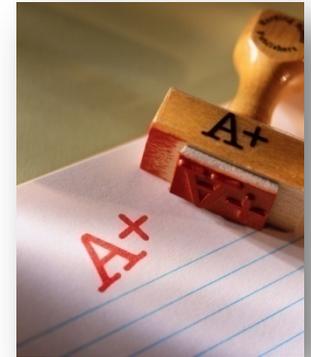


# Exercise Time!

▶ Match each benefit to a document type:

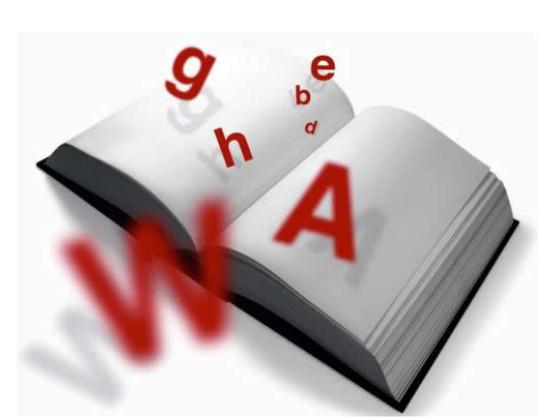
- Soil characterization project plan: \_\_\_\_\_
- Soil characterization procedure: \_\_\_\_\_
- Soil characterization report: \_\_\_\_\_

1. Stakeholder buy-in
2. Process improvement, optimization, waste reduction
3. Increase in knowledge (via research, communication)
4. Record of work performed
5. Summary of conclusions drawn
6. Validation of work and business methods
7. Training material
8. Traceable requirements flowdown
9. Increased award fees & new work won



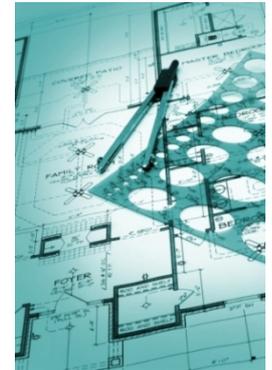
# Getting Help

- ▶ Technical writer
- ▶ Technical editor
- ▶ Graphic designer
- ▶ Copy editor
- ▶ Word processor
- ▶ Graphic artists



# Tech. Writers

- ▶ Tech. writer = content development (research, verification, validation, etc.)
  - Tech. background is key; engineers = great choice!

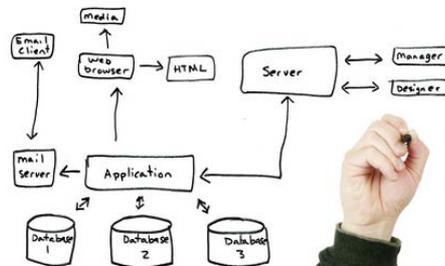


*A good tech. writer takes control—  
leading walk-downs, facilitating meetings, etc.*



# Tech. Editors

- ▶ Tech. editor = content quality (logic flow, grammar, style, clarity, integration, etc.)
  - Impresses your colleagues; requires education and apprenticeship



*Tech. editors think about how to best organize info.  
and whether the info. makes sense.*

# Graphic Designers

- ▶ Graphic designer = complex diagrams, drawings, and professional document design
  - Make you look great and make your documents a pleasure to read; requires talent and education



*Graphic designers make everything look good and find easy ways to show complex info.*

# Copy Editors

- ▶ Copy editor = document quality (check spelling, acronyms, callouts, references, format consistency, etc.)
  - Prevents embarrassment; OJT suffices

*A copy editor will “search and replace” or peruse key items but won’t try to grasp content.*



# Word Processors

- ▶ Word processor = formatting (put text in template, check numbering, check graphics)
  - Graphic designers are great but anyone with MS Word skills will do

*A word processor formats and may perform a final "print proof" if no editor is available.*



# Graphic Artists (Printers)

- ▶ Graphic Artist = Printing and web publication
  - Graphic artists print what graphic designers create
  - High-end, professional equipment and software
  - Requires formal training if not education

*A graphic artist differs from a graphic designer, although many people use the terms interchangeably*



# Who Are You?

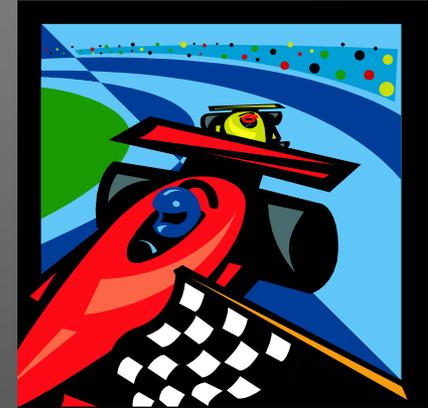
- ▶ You call a team meeting to discuss overall approach and method
  - ▶ You create a custom graphic
  - ▶ You convert Excel data to a table
  - ▶ You make a very complicated table easier to understand
  - ▶ You research regulations and contractual requirements
  - ▶ You print a multi-volume report that's photo quality
- 

# DIY Writing

The image features a white background with the text "DIY Writing" centered in a dark grey, sans-serif font. At the bottom, there is a decorative graphic consisting of a teal gradient area on the left, a black horizontal line, and a light blue gradient area on the right.

# Start Well To Finish Well

- ▶ Identify your audience
- ▶ Determine what they need (Ask them!)
- ▶ Gather original material
- ▶ Select the document type
- ▶ Develop a 3–step flow chart, or purpose statement, or 3–point outline



# Understand Your Audience

- ▶ Audience drives:
  - Length
  - Style/presentation
  - Content
  - Word usage
- ▶ Message = Send + Receive + Translate
- ▶ Different people think differently
- ▶ Our experiences shape our perspectives
- ▶ Audience experience with the subject matter...matters!



# Answer the Following:

- ▶ 1) Can you read and count at the same time?
- ▶ 2) What do you see/hear when you think?
- ▶ 3) What's 15% of 40? Now list the steps you used to calculate the answer.
- ▶ 4) Which picture does not belong?



# Respect Your Audience

- ▶ Don't waste readers' time
  - Tell them what they don't know, in words they can understand and a format they can read easily
- ▶ Use your document as a starting point (not just an end point)
  - Plans are not important—but planning is everything!
- ▶ Realize your document is often the only work results your client sees
- ▶ Assume people will actually read your document (they may surprise you)



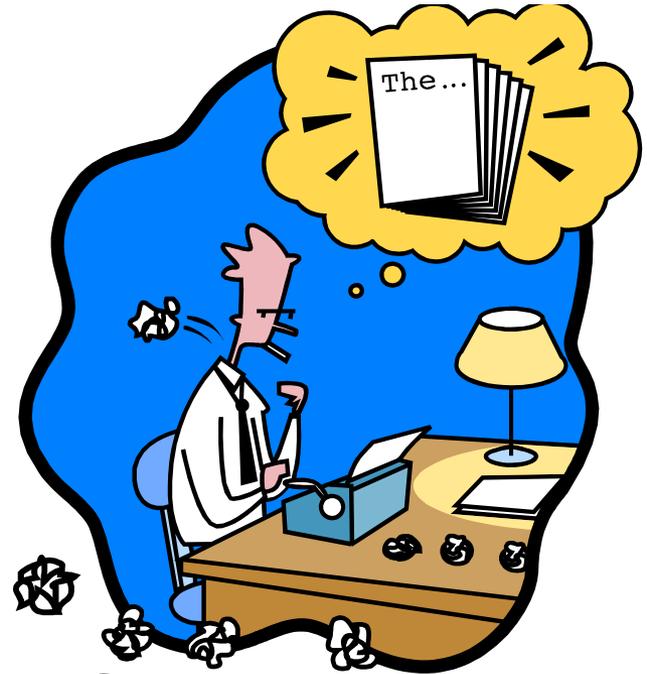
# Tell Them What They Don't Know

- ▶ Offer unique info.:
  - Interpret data
  - Draw conclusions
  - Make recommendations
  - Provide instructions
  - Define boundaries (setpoints, etc.)
  - Record outcomes
  - Specify measurements
  - Identify benefits and innovations
  - Sell your concepts
- ▶ If you have no unique info., get help
  - Interview others as needed
- ▶ Address *why* and *how*, not just *what*



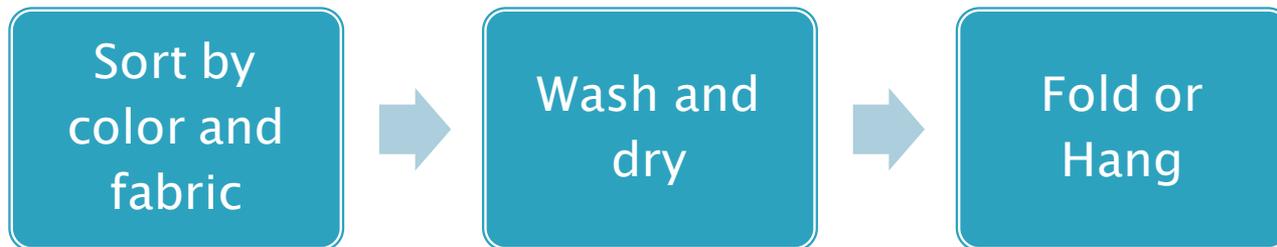
# Writer's Block?

- ▶ If you get stuck, answer:
  - Who
  - What
  - Where
  - When
  - Why
  - How
- ▶ Ignore what you don't know at first; start with what you do know
- ▶ Don't forget your flow chart!



# The World's Easiest Flow Chart

- ▶ Make a flow chart for:
  - A procedure for doing laundry (example below)
  - A report on a task you've done
  - A plan for an activity you'd enjoy

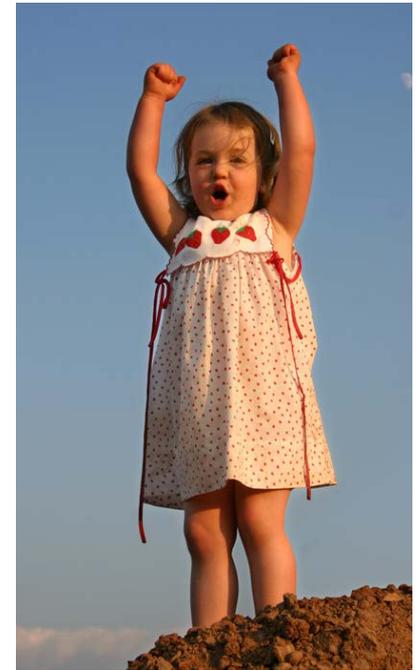


# It's All So Clear Now

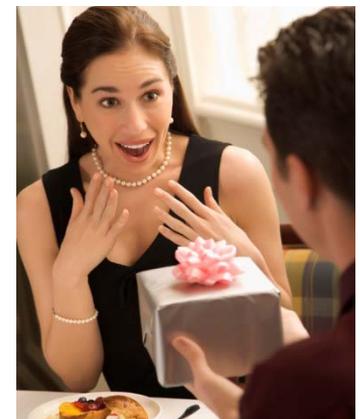
- ▶ Write clearly and concisely:
  - Writing omits body language and vocal tone
  - Geography drives language usage
  - To those with a hammer, everything looks like a nail (perspective shapes interpretation)



# See the Difference!

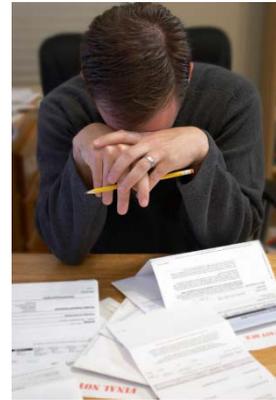


*No words accompany these pictures, but we get the message!*



# Good, or Bad?

You drive me crazy.



*Absent body language and vocal tone,  
the message must be extremely clear!*



# Keep It Simple

- ▶ No buzzwords, new words, or slang words
- ▶ No flowery prose
- ▶ Use short sentences and paragraphs
- ▶ Include only relevant info.; remove all else (think “lean”)



# Use Plain Words

- ▶ Keep paragraphs short
- ▶ Avoid overblown “legaleze” and officious phrases
- ▶ Omit unnecessary words

Look at your local paper for examples.



# Use Short Sentences

- ▶ Use subject + verb + object
- ▶ Use active voice
- ▶ Use strong, descriptive verbs
  - Avoid “to be” and “to have” variations

## Examples of Strong Verbs

accomplish	describe	install	produce	show
achieve	design	maintain	recommend	strike
act	develop	offer	represent	transform
analyze	establish	predict	reveal	undergo
assume	exhibit	present	serve	warp

# Examples

- Before: The engineers had a meeting with the stakeholders.
  - Before: The project is behind schedule by 2 weeks.
  - Before: A list of options is shown in Table 1.
- 

# Examples

- After: The engineers met with the stakeholders.
  - After: The schedule lapsed 2 weeks.
  - After: Table 1 lists options.
- 

# Example

- ▶ Before:
  - The company is dedicated to supplying exemplary service to all site tenants and contractors. There are many necessary interface requirements to ensure the successful accomplishment of agency programs and missions. Not all tenants on the site are supporting the agency missions; however, due to the nature of the company's work scope, interface is necessary to ensure requirements are properly addressed. An example of where ongoing interface is required is the maintenance program that is managed by the company under contract to the agency. Necessary interface also includes shared responsibilities on mutually utilized systems and infrastructure. Due to the spectrum of project contacts and interfaces, management is keenly aware of the need to maintain open communication with all site interfaces. As such the management team exercises deliberate attention to activities across the site to ensure both knowledge and communication are maintained.

# Example

## ▶ After:

- The company will communicate with all site tenants — including those not directly supporting the agency's mission. For instance, the company will coordinate maintenance on shared infrastructure.

# To Be? Not To Be!

Vague:

- ▶ Am
- ▶ Is
- ▶ Are
- ▶ Was
- ▶ Were
- ▶ Be
- ▶ Being
- ▶ Been



Which would you say  
to your significant  
other?

- ▶ You are loved by  
me....  
or
- ▶ *I love you!*

# When “Be” Means “=”

- ▶ Linking verbs are ok:

- The car is yellow

*But*

- The elephant drove the car (not “is on the car”)



- ▶ Passive voice isn't wrong; use it:

- To downplay action or actors: *“The popular project was cancelled due to funding cuts”*
- When the actor is not known: *“The video was posted to YouTube”*

- ▶ Just don't overuse it

# Fix Issues

- ▶ Fix all technical errors
- ▶ Never assume someone else will catch them
- ▶ Most “technical reviewers” will focus on style
- ▶ Most of their style “corrections” are wrong 😊



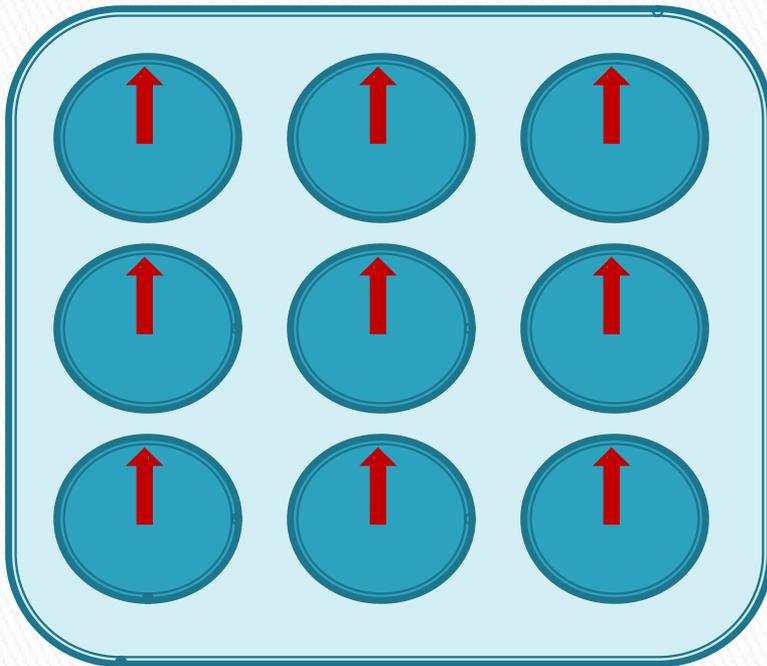
*Allowing technical reviewers to “correct” style burns time and money...especially if your company has no style guide.*

# Use Human Factors

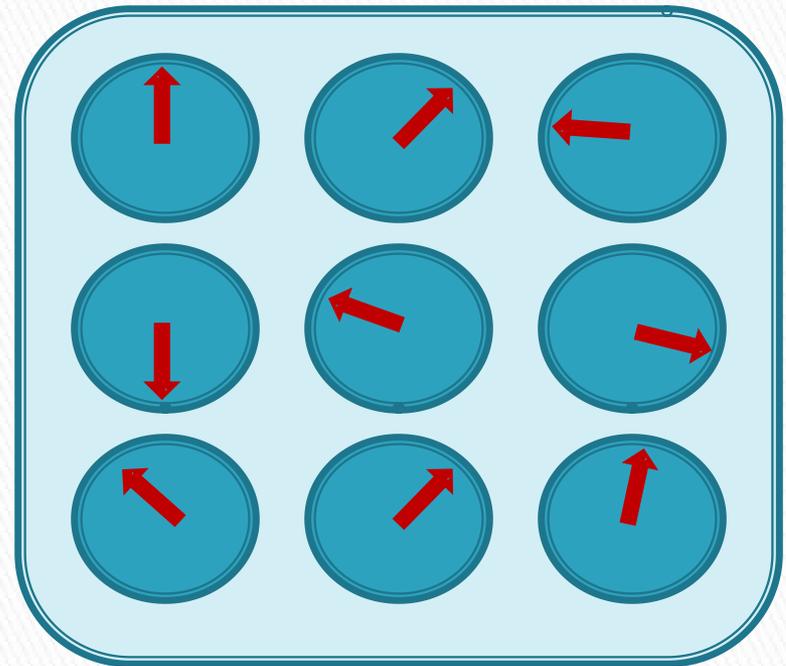
- ▶ Use consistent terms to describe equipment and systems (match component labels).
  - ▶ Ensure a logical flow (importance, systematic, chronological, alphabetical, etc.)
  - ▶ Eliminate the hazard, engineer controls, implement mitigation measures, employ user cautions.
- 

# Human Factored Controls

▶ Good



▶ Bad



# Write Winning Proposals

- ▶ Focus on your unique advantages
- ▶ Proposals = marketing materials (not tech. documents)
- ▶ Sell, sell, sell -- your product, methods, team, and self
  - Don't just regurgitate scope
  - Tell how you will accomplish the work
  - Explain why your methods have merit (innovative, reliable, cheap, fast, "green," compliant, safe, etc.)
  - A little embellishment is okay—"truth in advertising"
  - Tailor resumes to the work scope—2 pages each



# Resolve Comments

- ▶ Bring stakeholders together
- ▶ Appoint a scribe for meetings
- ▶ Send out minutes for concurrence
- ▶ Thank all contributors
- ▶ Use your power! (Simply reply “noted” to irrelevant comments.)



# Control Evolution

- ▶ Establish a consistent file-naming protocol (e.g., 2013-1004 0900\_File name\_Initial draft)
- ▶ Clearly mark all drafts as such
- ▶ Put ~3 key steps on schedule (e.g., *prep, to review, to approval*)
- ▶ Track other dates in Excel
- ▶ For deliverables, also track “submitted” and “accepted”



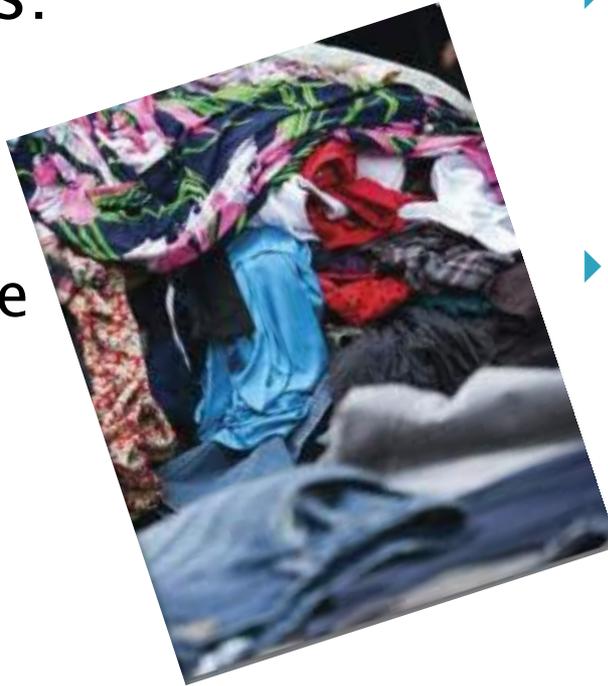
# DIY Editing

The image features a white background with the text "DIY Editing" centered in a dark grey, sans-serif font. At the bottom, there is a decorative graphic consisting of a teal gradient area on the left, a black horizontal line, and a light blue gradient area on the right.

# Clarify the Actors

## ▶ Pronouns:

- It
- They
- Them
- Someone
- Me
- You
- Him
- Her
- Us



- ▶ Antecedent = The noun to which a pronoun refers
- ▶ Put antecedents first
  - *“The ladies of the church have cast off clothes of every kind; they can be seen in the church basement on Friday afternoon.”*

# When You're Short on Time...

- ▶ Focus on the critical elements:
  - Cover
  - Table of contents
  - Executive summary
  - First two pages and last two pages
  - Conclusions and recommendations
  - Title and headings
  - Consistent formatting



# Quick and Dirty Shortcuts

- ▶ STOP CAPITALIZING EVERYTHING
  - Capitalize only unique nouns (> 1 = lc)
  - Use quotes, bold, or italics instead
  - Too many capitals impair reading



Example: *The president came to MU to speak on the federal government's action plan for revitalizing underutilized urban areas during the coming calendar year.*

# Honest!

*“All uppercase sentences usually bring the reader to a standstill because the shapes of words disappear, causing the reader to slow down and study each letter. Ironically, readers tend to skip sentences written in all uppercase.”*



Plain English Handbook, p. 43

U.S. Securities and Exchange Commission

<https://www.sec.gov/pdf/handbook.pdf>

*This is a fabulous, free guide on technical writing, editing, and formatting. It's not copyrighted, so you can share at will (see p. 6 of the guide)!*

# What Our Brains Really Read

SOME TYPEFACES ARE EASIER TO READ THAN OTHERS; ADDITIONALLY, LEFT-ALIGNED TEXT HAS BETTER SPACING THAN JUSTIFIED TEXT.

Some typefaces are harder to read than others; additionally, left-aligned text has better spacing than justified text. Calibri and Cambria are the “new” Times Roman and Ariel.

# A Word About Emphasis

- ▶ Emphasizing everything emphasizes nothing
- ▶ Use consistent font, color, size, and shape for warnings, cautions, notes, etc.
- ▶ Use “shall” only when no options should exist — auditors love “shall”



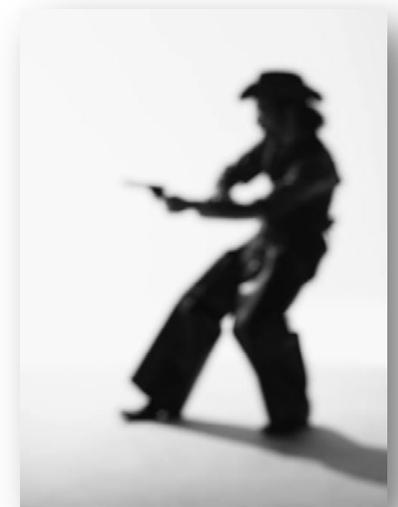
# More Quick and Dirty Shortcuts

- ▶ Go easy on acronyms (include a list)
  - ▶ Put 1 space or 2 between sentences — not both
  - ▶ Use bullets for  $> 3$  items in a series
    - Number lists only to show order of importance
    - When order doesn't matter, alphabetize bullets
  - ▶ Omit end punctuation from bullet lists
- 

# Tame Wild Text with Bullets

Before:

All changes to the lockout/tagout program must be reviewed and approved in advance by the facility manager, construction engineer, work-group supervisor, utilities owner, competent person, and issuing authority.



# Tame Wild Text with Bullets

After:

All of the following stakeholders must approve any proposed changes to the lockout/tagout program:

- Competent person
  - Construction engineer
  - Facility manager
  - Issuing authority
  - Utilities owner
  - Work-group supervisor
- 

# Establish Order with Lists



Before:

The steps for obtaining an excavation permit include reviewing engineering drawings, walking down the work site, performing a sub-surface survey to locate hidden obstructions/uncharted utilities, and submitting a request (form A-239) to the issuing authority.

# Establish Order with Lists

After:

To obtain an excavation permit:

1. Review engineering drawings
  2. Walk down the work site
  3. Perform a sub-surface survey (to locate hidden obstructions and uncharted utilities)
  4. Submit form A-239 to the issuing authority
- 

# Possession Is 9/10 of the Law

## ▶ Singular possessives

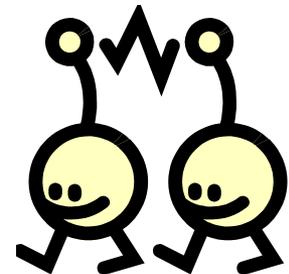
- Add the apostrophe and *s* to the end of the word
  - Driver's license (one unique license is issued to each individual driver)

## ▶ Plural possessives

- Make the word plural; then add the apostrophe
  - Users' manual (one manual exists for a single piece of equipment, but anyone can read it)
  - Women's rights

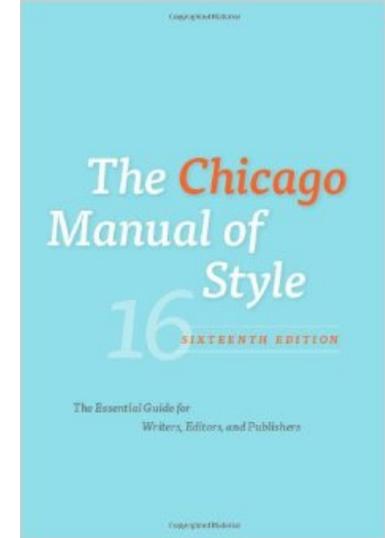
## ▶ Possessive pronouns vs. contractions

- Its (it's = it is)
- Whose (who's = who is)



# Style Is Only Preference

- ▶ Language is dynamic; few rules exist...
- ▶ Lots of guides exist:



Style Guide	Applicable Field	Primary Users
Harbrace College Handbook	General business	Secretaries, Admin. assistants, etc.
AP (Associated Press)	Journalism	Journalists/editors at newspapers, magazines, etc.
MLA (Modern Language Assoc.)	Arts academia	Scholars of humanities, language, literature, etc.
U.S. Govt. Printing Office	Govt. documents	Employees/subs of federal agencies
Chicago Manual of Style	Technical writing	Engineers, scientists, technical writers/editors, etc.

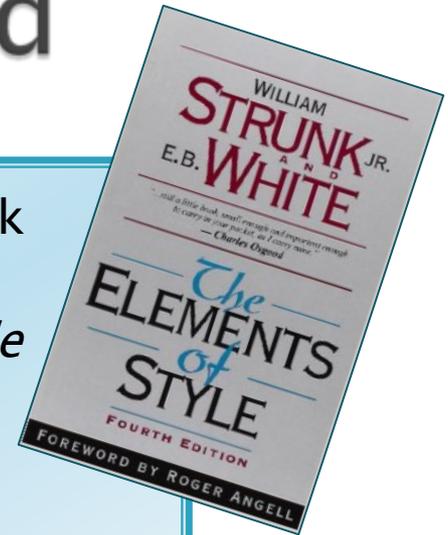
- ▶ Strive for consistency in your document.

Free!! On line at <http://www.gpo.gov>!

# Style Chain of Command



Tip: Read Strunk and White's *Elements of Style* for a brief overview....



**Never waste resources  
obsessing over style;  
just make your document  
consistent**

# Review, Revise, and Finalize

- ▶ Get a peer review
  - Also get a review from a disinterested party
  - Or, read your document aloud
  - Or, put it away for at least 2 days before reading it again
- ▶ Run spell check, and check for known typos (e.g., manger)
- ▶ Update all fields  
(in MS Word, hit *Ctrl A* then *F9*)



# DIY Formatting

The image features a white background with the text "DIY Formatting" centered in a dark grey, sans-serif font. At the bottom, there is a decorative graphic consisting of a teal gradient area on the left, a black horizontal line, and a light blue gradient area on the right.

# The Sizzle Sells the Steak

- ▶ Ensure the following items stand out and look consistent:
  - Captions
  - Footers
  - Headers (at the top of each page)
  - Headings (at the start of each new subject)
  - Lists (bullets or numbered)
  - Page numbers



# Do Yourself Some Favors

- ▶ Use consistent font type and size  
(Cambria, Calibri, Arial, or Times,  $\geq 8$  and  $\leq 12$ )
- ▶ Leave ample white space

"...when *everything*  
(background, structure,  
content) is emphasized,  
*nothing* is emphasized;  
the design will often be  
noisy, cluttered, and  
informationally flat."

Edward Tufte  
*Visual Explanations*

## Layout

Designers think carefully about white space, column width, linespacing, and paragraph length. These design elements determine whether reading is easy or becomes too much of a physical or mental chore.

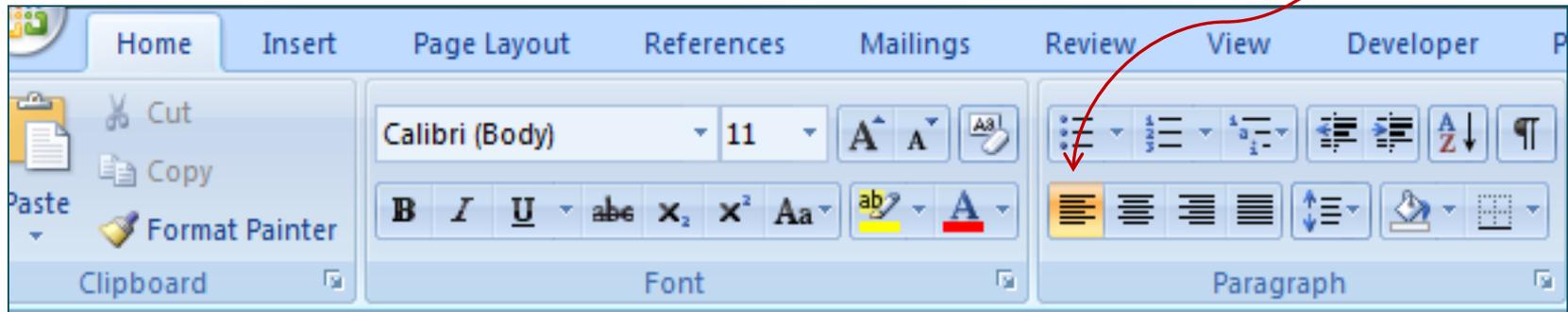
### Use white space effectively

Generous use of white space on the page enhances readability, helps to emphasize important points, and lightens the overall look of the document. White space especially affects the readers of disclosure documents because these documents usually feature dense blocks of impenetrable text.

You should fight the impulse to fill up the entire page with text or graphics. A wide left or right margin can make the document easier to read. The use of white space between sections or subsections helps readers recognize which information is related.

# Do Yourself Some More Favors

- ▶ Correct “widows” and “orphans” (single words/ lines that spill to a new page)
- ▶ Use left-justified text (“block” or “full justified” invites odd spacing)



between the words inhibit the flow of reading. Besides, they look dumb. Keep your eyes open as you look at professionally-printed work...and you'll find there's a very strong trend now to align type on the left and leave the right ragged.

# Good Design

- ▶ Group objects together
- ▶ Align objects
- ▶ Use pictures (they paint 1000 words)

# Okay Expression of Themes

- ▶ Edit paper documents
- ▶ Edit documents on disk
- ▶ Conserve electricity

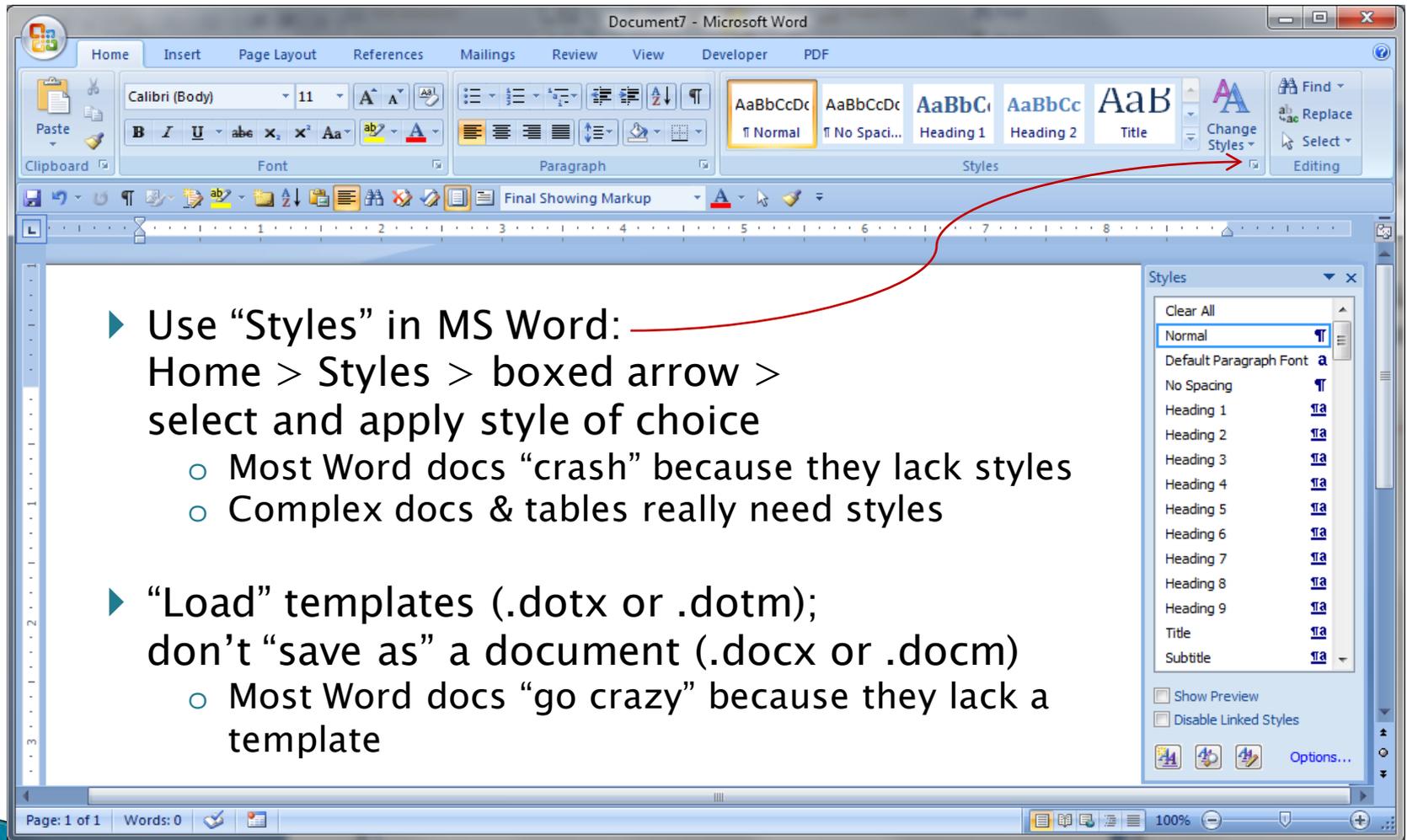


# Better Expression of Themes

- ▶ Edit paper documents
- ▶ Edit documents on disk
- ▶ Conserve electricity



# Use Styles and Templates



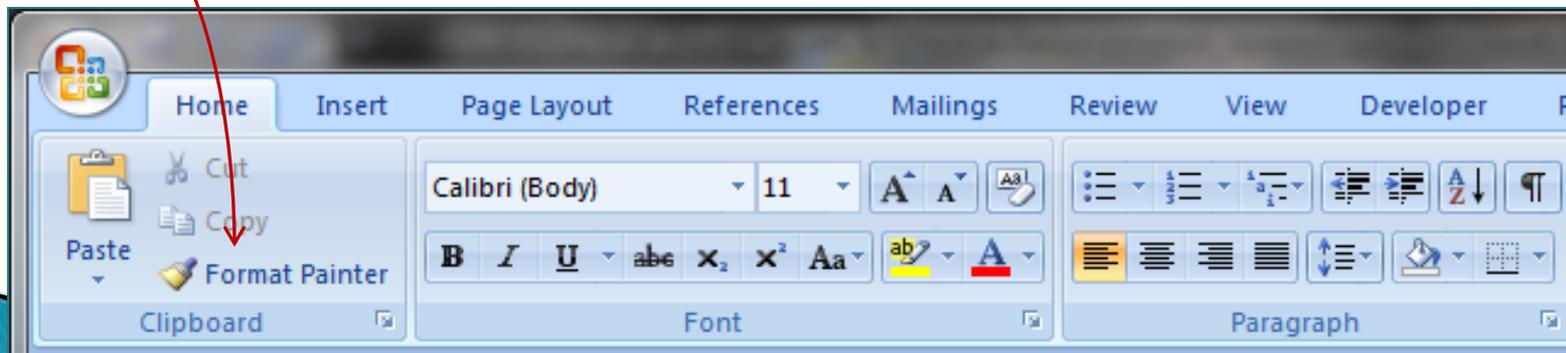
The screenshot shows the Microsoft Word 2010 interface. The ribbon is set to the 'Home' tab, and the 'Styles' section is active. The 'Normal' style is selected in the Styles gallery. A red arrow points from the 'Change Styles' dropdown menu in the ribbon to the 'Normal' style in the Styles task pane. The task pane lists various styles including Normal, Default Paragraph Font, No Spacing, and several Heading levels (1-9), Title, and Subtitle. The 'Show Preview' and 'Disable Linked Styles' options are visible at the bottom of the task pane.

- ▶ Use “Styles” in MS Word: Home > Styles > boxed arrow > select and apply style of choice
  - Most Word docs “crash” because they lack styles
  - Complex docs & tables really need styles
- ▶ “Load” templates (.dotx or .dotm); don’t “save as” a document (.docx or .docm)
  - Most Word docs “go crazy” because they lack a template

# The Greatest Thing Since TV

- ▶ Use “Format Painter”:  Format Painter
  - Click in a paragraph with identical formatting
  - Select the “Format Painter” icon
  - Click in a paragraph that needs formatted

*Viola! That's it; Word will apply  
all the formatting for you!*



# A Format Painter Shortcut

- ▶ To apply the same formatting to multiple paragraphs:
    1. Click in a paragraph with identical formatting
    2. Simultaneously hit Ctrl + Shift + C
    3. Click in a paragraph that needs formatted
    4. Simultaneously hit Ctrl + Shift + V
- 

# Hot Keys Are Hot!

## ▶ Hot keys:

- Copy [*Ctrl + c*]
- Cut [*Ctrl + x*]
- Find [*Ctrl + f*]
- Paste [*Ctrl + v*]
- Repeat action [*Ctrl + y*]
- Save [*Ctrl + s*]
- Undo [*Ctrl + z*]

Key	Action
Ctrl + 	Up 1 line of text
Ctrl + 	Down 1 line of text
Ctrl + 	Up 1 paragraph
Ctrl + 	Down 1 paragraph
Ctrl + 	Right one word
Ctrl + 	Left one word
End	To end of line

*Ctrl + f works in most PDFs and web pages too!*

*Ctrl + y acts like a mini macro!*

*You can create custom hot keys too, for one document or all your documents!*

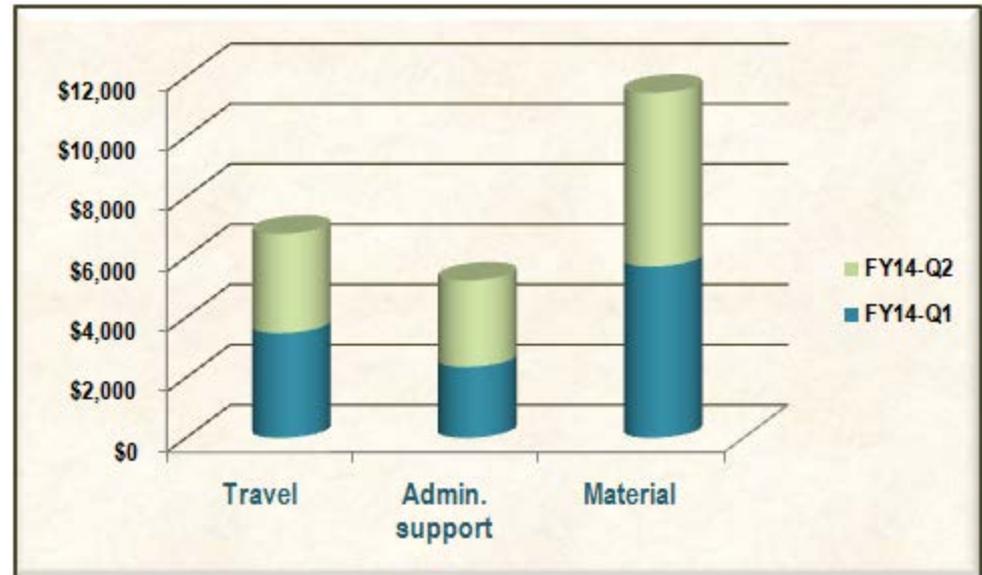
# Charts Rock

*In Office Suite (Word, Excel, etc.), you can create beautiful charts and graphs with a single key stroke!*

## ▶ Insert a chart:

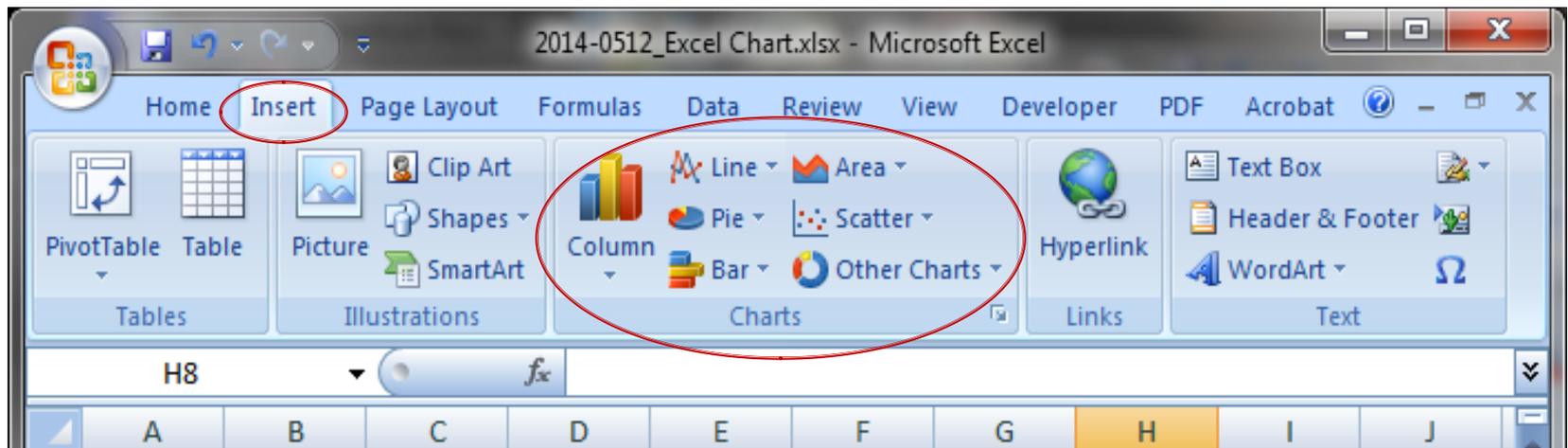
- In Excel, create some data
- With your cursor, highlight the data to include
- Select a chart type (see next slide)

Expense	FY14-Q1	FY14-Q2
Travel	\$3,480	\$3,295
Admin. support	\$2,356	\$2,864
Material	\$5,690	\$5,767



# And They're Easy!

- ▶ Insert a chart:
  - Make a table of data
  - With your cursor, highlight the data to include
  - Select the chart or graph of your choice



# Google More Shortcuts

- ▶ Macro or VB script (add *Developer* tab)
- ▶ Insert (SmartArt, chart)
- ▶ Insert auto. references
- ▶ Update fields (Ctrl A + F9)

