300,000 cetaceans are killed every year

Cetaceans are marine mammals including whales, dolphins and porpoises

Just over 27 million tonnes of marine life are discarded annually as a result of fishing

27 million tonnes

89% of hammerhead sharks have disappeared from the Northeast Atlantic ocean in the last 18 years

Introduction to Infographics
Kelly Schultz, Data Visualization Librarian
Agenda

• Learning Objectives
• Introduction to Infographics
• Design Process – Best Practices
• Activity: Critiques
• Break
• Tools
• Activity: Creating an Infographic
• Wrap-up
Learning objectives

• Participants will be able to:
  ✓ Recognize what infographics are and when to use them
  ✓ Critique and design infographics, using their knowledge of best practices
  ✓ Identify appropriate infographic creation tools
  ✓ Use Piktochart to create infographics
  ✓ Be aware of Map & Data Library services where they can go for more help
What are Infographics?
Diabetes: The silent scourge

Infographic Example - Inform
Why use Infographics?
Design Process - Best Practices
Audience and Purpose
Common Charts & Graphs

BAR GRAPH

LINE GRAPH

PIE CHART

MAP
Chart & Graph Tips – Bar Graphs

This is correct.  
Hm, first bar got shorter.  
It’s going...

...going...

...going.

First bar is gone.
Chart & Graph Tips – Scale Intervals
Chart & Graph Tips – Scale
Chart & Graph Tips – Pie Charts

2 slices

4 slices

8 slices

Not bad.

Still bearable.

Um.

16 slices

32 slices

64 slices

Wait.

Stop it.

Now you’ve done it.
Chart & Graph Tips – 3D
Chart & Graph Tips – Maps
Clarity vs Creativity

SMARTPHONES
Consumer Behaviour

Find themselves checking their phone for messages, alerts, or calls—even when they don’t notice their phone ringing or vibrating. 87%

Have slept with their phone next to their bed because they wanted to make sure they didn’t miss any calls, text messages, or other updates during the night. 44%

TOP 5 ACTIVE TWITTER MOMENTS

GRAPH A

GRAPH B

tweet-o-meter
Planning
Hierarchies

A Brief History Of Lorem Ipsum
By: John Smith

What is Lorem Ipsum?

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

Why do we use it?

It is a long established fact that a reader will be distracted by the readable content of a page when looking at its layout. The point of using Lorem Ipsum is that it is the most common dummy text model, as opposed to using 'Content here, content here', making it look like readable English. Many desktop publishing packages and web page editors now use Lorem Ipsum as their default model text, and a search for 'lorem ipsum' will uncover many web sites still in their infancy. Various versions have evolved over the years, sometimes by accident, sometimes on purpose (injected humour and the like).

Where does it come from?

Contrary to popular belief, Lorem Ipsum is not simply random text. It has roots in a piece of classical Latin literature from 45 BC, making it over 2000 years old. Richard McClintock, a Latin professor at Hampden-Sydney College in Virginia, looked up one of the more obscure Latin words, consectetur, from a Lorem Ipsum passage, and going through the cites of the word in classical literature, discovered the undoubtable source. Lorem Ipsum comes from sections 1.10.32 and 1.10.33 of "de Finibus Bonorum et Malorum" (The Extremes of Good and Evil) by Cicero, written in 45 BC. This book is a treatise on the theory of ethics, very popular during the Renaissance. The first line of Lorem Ipsum, "Lorem ipsum dolor sit amet..", comes from a line in section 1.10.32.

The standard chunk of Lorem Ipsum used since the 1500s is reproduced below for those interested. Sections 1.10.32 and 1.10.33 from "de Finibus Bonorum et Malorum" by Cicero are also reproduced in their exact original form, accompanied by English versions from the 1914 translation by H. Rackham.
Fonts

Sans Serif
- Strokes have even width
- No serif everywhere / Plain without strokes

Serif
- Thick and thin strokes
- Serifs everywhere. The small strokes flourished that adorn the lettering.

Arvo

Colour Palettes

Adobe Color CC

Change Color Harmony
Analogous
ColorBrewer – Qualitative Palette

- Number of data classes: 3
- Nature of your data: qualitative
- Pick a color scheme:
  - Colorblind safe
  - Print friendly
  - Photocopy safe
- Only show: colorblind safe
- Context:
  - Roads
  - Cities
  - Borders
- Background:
  - Solid color
  - Terrain
  - Color transparency

Colors used:
- #1b9e77
- #d95f02
- #7570b3
ColorBrewer – Diverging Palette
<table>
<thead>
<tr>
<th>Trichromatic view:</th>
<th>Anomalous Trichromacy:</th>
<th>Dichromatic view:</th>
<th>Monochromatic view:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Red-Weak/Protanomaly</td>
<td>Red-Blind/Protagnopia</td>
<td>Monochromacy/Achromatopsia</td>
</tr>
<tr>
<td></td>
<td>Green-Weak/Deuteranomaly</td>
<td>Green-Blind/Deuteranopia</td>
<td>Blue Cone Monochromacy</td>
</tr>
<tr>
<td></td>
<td>Blue-Weak/Tritanomaly</td>
<td>Blue-Blind/Tritanopia</td>
<td></td>
</tr>
</tbody>
</table>

Use lens to compare with normal view:  
- No Lens  
- Normal Lens  
- Inverse Lens

Reset View
# Colour Considerations

### Trichromatic view:
- Normal
- Red-Weak/Protanomaly
- Green-Weak/Deuteranomaly
- Blue-Weak/Tritanomaly

### Anomalous Trichromacy:
- Red-Weak/Protanomaly
- Green-Weak/Deuteranomaly
- Blue-Weak/Tritanomaly

### Dichromatic view:
- Red-Blind/Protanopia
- Green-Blind/Deuteranopia
- Blue-Blind/Tritanopia

### Monochromatic view:
- Monochromacy/Achromatopsia
- Blue Cone Monochromacy

Use lens to compare with normal view:
- No Lens
- Normal Lens
- Inverse Lens

[Reset View] [Open simulated image in new window]
while syncing. Or in more technical terms, Reeder doesn’t depend on CoraData anymore by using SQLite directly.

So, there is better performance, what else will make Reeder 2.0 so much better than 1.2? Well, let’s start with...

State saving

Finally, Reeder will remember where it was last time you used it. When quitting the app, Reeder will save its state and restore it on relaunch. No need to panic anymore if you get a phone call while reading an article.

Product Story

People at their best live unfamed, going beyond expectations to surprise and delight us. With SAYL, we set out to design and build a chair family that gives form to that spirit. Inspired by the principles of suspension bridges, the frameless back of the SAYL work chair encourages a full range of movement while the suspension...
Critiquing Infographics
Let’s work together – groups of 2 or 3
Infographic Creation Tools

ADOBE ILLUSTRATOR CC

Canva
Empowering the world to design

VENNGAGE

easelly

Visme

infogram
Demo: Piktochart

Easy-to-Use Maker

No complex design software. No heavy designer fees. Just a simple, intuitive tool that helps you tell your story with the visual impact it deserves.

START FOR FREE  WATCH DEMO
Resources

- Data Visualization Guide: [https://mdl.library.utoronto.ca/dataviz/getting-started](https://mdl.library.utoronto.ca/dataviz/getting-started)
  - Design Principles section (with data viz tips): [https://mdl.library.utoronto.ca/dataviz/design-principles](https://mdl.library.utoronto.ca/dataviz/design-principles)
  - Speciality Visualization Areas section (with map making tips): [https://mdl.library.utoronto.ca/dataviz/specialty-visualization-areas](https://mdl.library.utoronto.ca/dataviz/specialty-visualization-areas)
  - Research about visual variables and visual perception are found in this section of the data viz design workflow page: [https://mdl.library.utoronto.ca/dataviz/workflow#elements](https://mdl.library.utoronto.ca/dataviz/workflow#elements)
  - Data Viz Guide’s Books, Blogs & More page: [https://mdl.library.utoronto.ca/dataviz/books-blogs-and-more](https://mdl.library.utoronto.ca/dataviz/books-blogs-and-more)

- Specific resources supporting the ideas mentioned on why visualization and storytelling are so powerful:
  - “Brain Rules: Vision” by Dr. John Medina: [http://brainrules.net/vision](http://brainrules.net/vision) (also see the accompanying PDF of additional references for more information)

- Learn more about storytelling with Data Visualization:
Resources Continued

• Modular Scale (for selecting font sizes): http://www.modularscale.com/?12&pt&1.5

• How to Choose Fonts (with sample font pairings): https://venngage.com/blog/how-to-choose-fonts/

• Links about scale and misleading graphs:
  • Bars and lines: méfiez-vous des morceaux choisis: https://excelcharts.com/of-bars-and-lines/

• University of North Carolina Chapel Hill Infographic Planning Worksheet: https://guides.lib.unc.edu/ld.php?content_id=33197056

Resources Continued

• Infographic examples (books):
  • Infographic Designers' Sketchbooks: http://go.utlib.ca/cat/9861504
  • Infographics: Designing and Visualizing Data: http://go.utlib.ca/cat/9985210
  • Infographics: The Power of Visual Storytelling: http://go.utlib.ca/cat/8722500

• Colour palettes:
  • Adobe Color CC: https://color.adobe.com/explore/most-popular/?time=all
  • Color Brewer: http://colorbrewer2.org/#type=sequential&scheme=BuGn&n=3
  • LOLColors: http://www.lolcolors.com
  • COLOURlovers: http://www.colourlovers.com/
  • Coolers: http://coolors.co/

• Coblis – Color Blindness Simulator: http://www.color-blindness.com/coblis-color-blindness-simulator/
Resources Continued

• Books on colour psychology:
  • Handbook of color psychology: http://go.utlib.ca/cat/10415098
  • Colour hunting: How colour influences what we buy, make and feel: http://go.utlib.ca/cat/8235358


• Inclusive Design: How to Make Your Visuals Accessible to All: https://piktochart.com/blog/inclusive-design-make-visuals-accessible/

• University of North Carolina Chapel Hill Evaluation Rubric for Design of Infographics: https://guides.lib.unc.edu/ld.php?content_id=35032138

• Some Useful Infographic Design Articles:
  • The Ultimate Infographic Design Guide: 13 Tricks for Better Designs: https://venngage.com/blog/infographic-design/
  • How to Make an Infographic in 5 Steps: https://venngage.com/blog/how-to-make-an-infographic-in-5-steps/
  • Infographic Design: https://www.canva.com/learn/how-to-design-infographics/
  • Piktochart Design Series: With These 8 Articles You Can Now Design Like a Pro: https://piktochart.com/blog/infographics-design-series-design-your-infographic-like-a-pro/
Infographic Creation Tools

• Desktop Tools:
  • Adobe Illustrator: https://www.adobe.com/ca/products/illustrator.html
  • Microsoft PowerPoint: https://products.office.com/en-ca/powerpoint

• Online Tools:
  • Piktochart: https://www.piktochart.com/
  • Canva: https://www.canva.com/
  • Venngage: https://venngage.com/
  • Visme: https://www.visme.co/
  • Easelly: https://www.easel.ly/
  • Infogram: https://infogram.com/
Useful Websites for Free Icons, Images, etc.

- https://www.flaticon.com/
- https://thenounproject.com/
- https://unsplash.com/
- https://pixabay.com/
- https://morguefile.com/
- https://www.flickr.com/commons
- https://commons.wikimedia.org/wiki/Main_Page
Activity (for GPS Credit)

Email me (kelly.schultz@utoronto.ca) within 1 week

Infographic – One Image
1. Either use the provided census data or your own data
2. Create a short/simple infographic, visualizing a few key statistics to tell a story
3. Be sure to select visualization forms appropriate to your data
4. Apply what you’ve learned regarding design: layout, fonts, colours, etc.

Reflection – One Paragraph
1. What you thought were the most important things you learned today
2. Why are they important
3. How you will apply this knowledge in the future
Final Thoughts

1) Key lesson?
2) Anything unclear?
3) Useful workshop?
   Why/Why not?
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- **Slide 12:** “How to Make an Infographic in 5 Steps”, Midori Nediger, [https://venngage.com/blog/how-to-make-an-infographic-in-5-steps/](https://venngage.com/blog/how-to-make-an-infographic-in-5-steps/)

• **Slide 14:** “Chart Dos and Don’ts”, Angela Zoss, https://guides.library.duke.edu/datavis/topten

• **Slide 16:** “Real Chart Rules to Follow”, Nathan Yau, http://flowingdata.com/2015/08/11/real-chart-rules-to-follow/

• **Slide 17:** “Trellis Plot Alternative to Three-Dimensional Bar Charts” by Naomi Robbins from Forbes.com, https://www.forbes.com/sites/naomirobbins/2012/06/07/trellis-plot-alternative-to-three-dimensional-bar-charts/#1f7b276c7dab

• **Slide 18:** “Canada”, Free SVG Maps, https://www.amcharts.com/svg-maps/?map=canada


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- **Slide 23:** “How to Choose Fonts That Make (Not Break) Your Infographic”, Midori Nediger, [https://venngage.com/blog/how-to-choose-fonts/](https://venngage.com/blog/how-to-choose-fonts/)
- **Slide 24:** “Typography II: 4 Things You Need To Know To Pair Fonts Well”, See Mei Chow, [https://piktochart.com/blog/typography-things-you-need-to-know-to-pair-fonts-well/](https://piktochart.com/blog/typography-things-you-need-to-know-to-pair-fonts-well/);

  “How to Choose Fonts That Make (Not Break) Your Infographic”, Midori Nediger, [https://venngage.com/blog/how-to-choose-fonts/](https://venngage.com/blog/how-to-choose-fonts/)
- **Slide 25:** Coolors, [https://coolors.co/](https://coolors.co/)
- **Slide 26:** Adobe Color CC, [https://color.adobe.com/create/color-wheel/](https://color.adobe.com/create/color-wheel/)
- **Slides 27-29:** ColorBrewer : [http://colorbrewer2.org](http://colorbrewer2.org)
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• Slide 45: audience wave, flickr.com/Gavin Tapp, https://flic.kr/p/aqvnet; Post-it sticker small yellow emtpy single left up - GIMP 2.8 by User:Mattes (creator), eyeknife (idea) - Own work. Licensed under GFDL via Wikimedia Commons - https://commons.wikimedia.org/wiki/File:Post-it_sticker_small_yellow_emtpy_single_left_up_-_GIMP_2.8.png#/media/File:Post-it_sticker_small_yellow_emtpy_single_left_up_-_GIMP_2.8.png

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