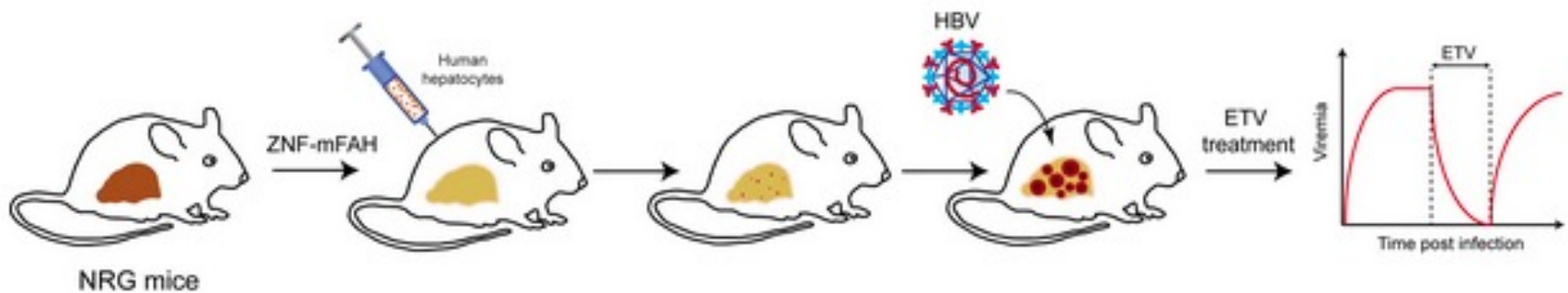


Additional Resources

Schematic Figure Design

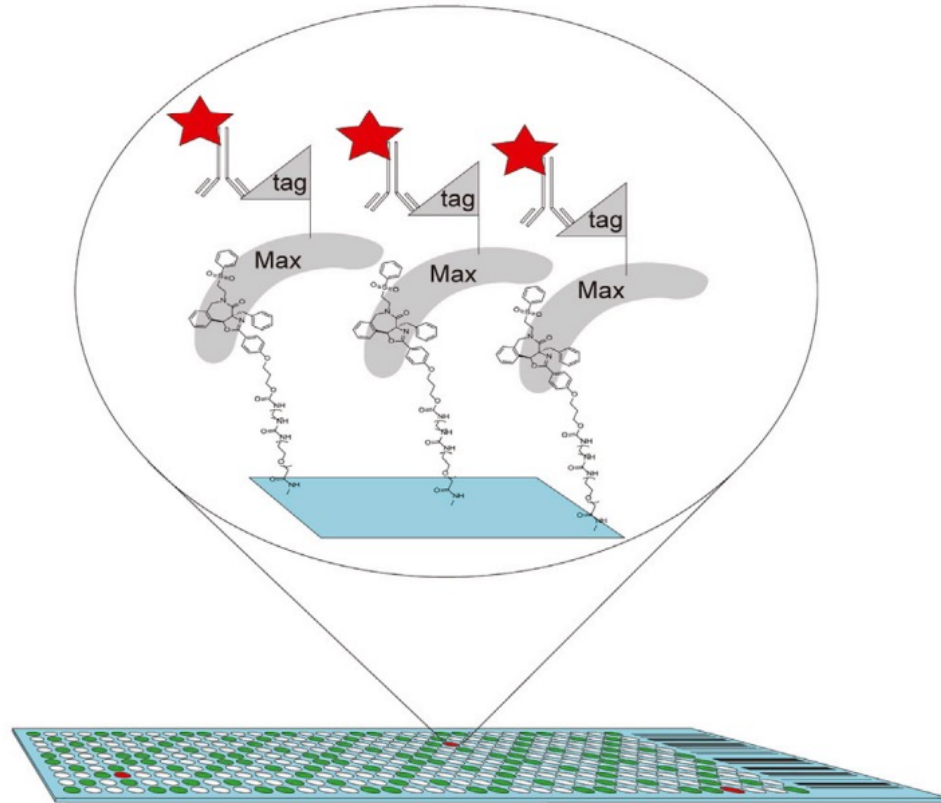
Follow key design principles when designing a schematic



- Readers read left to right and top to bottom
- Use intuitive alignments
- Use grayscale + a few consistent colors
- Use consistent fonts, font sizes, and line thicknesses

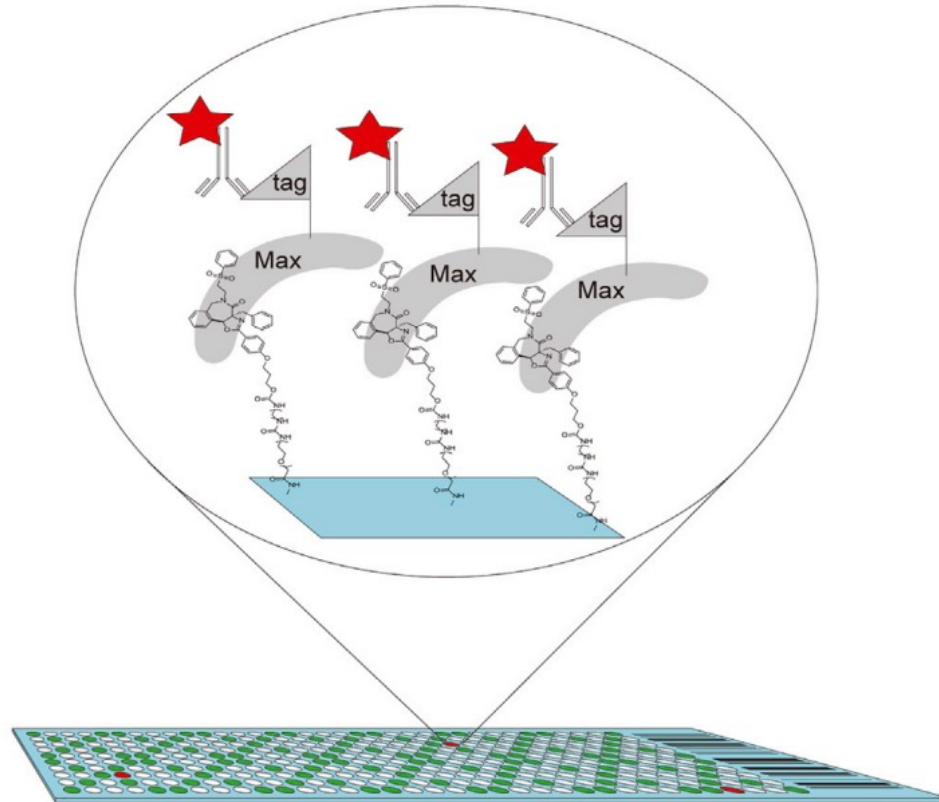
Where does your eye go with this figure?

Schematic example 1 of 2



Where does your eye go with this figure?

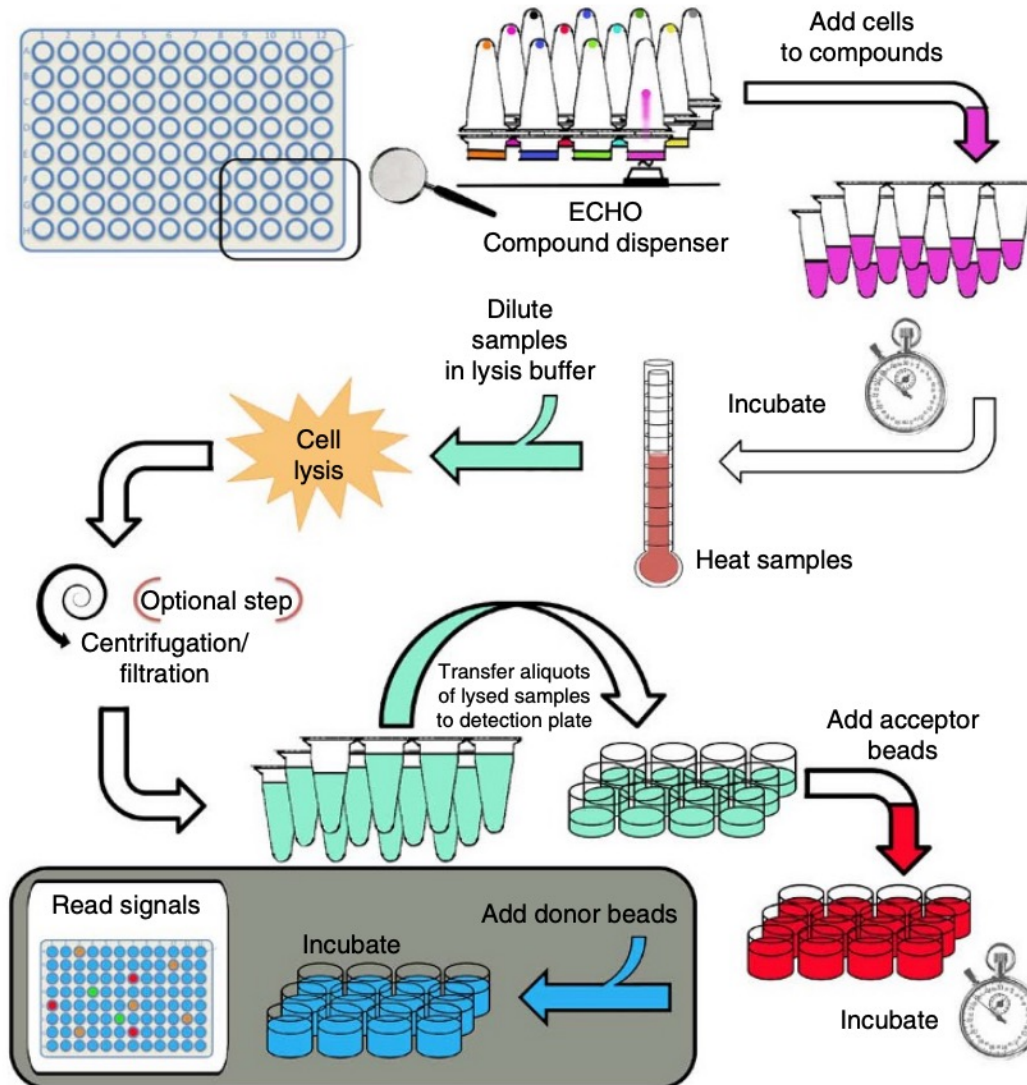
Schematic example 1 of 2



e.g. callout bubble to show scale and emphasis, bright red star = visually salient, molecular structures barely legible because of size/line weight

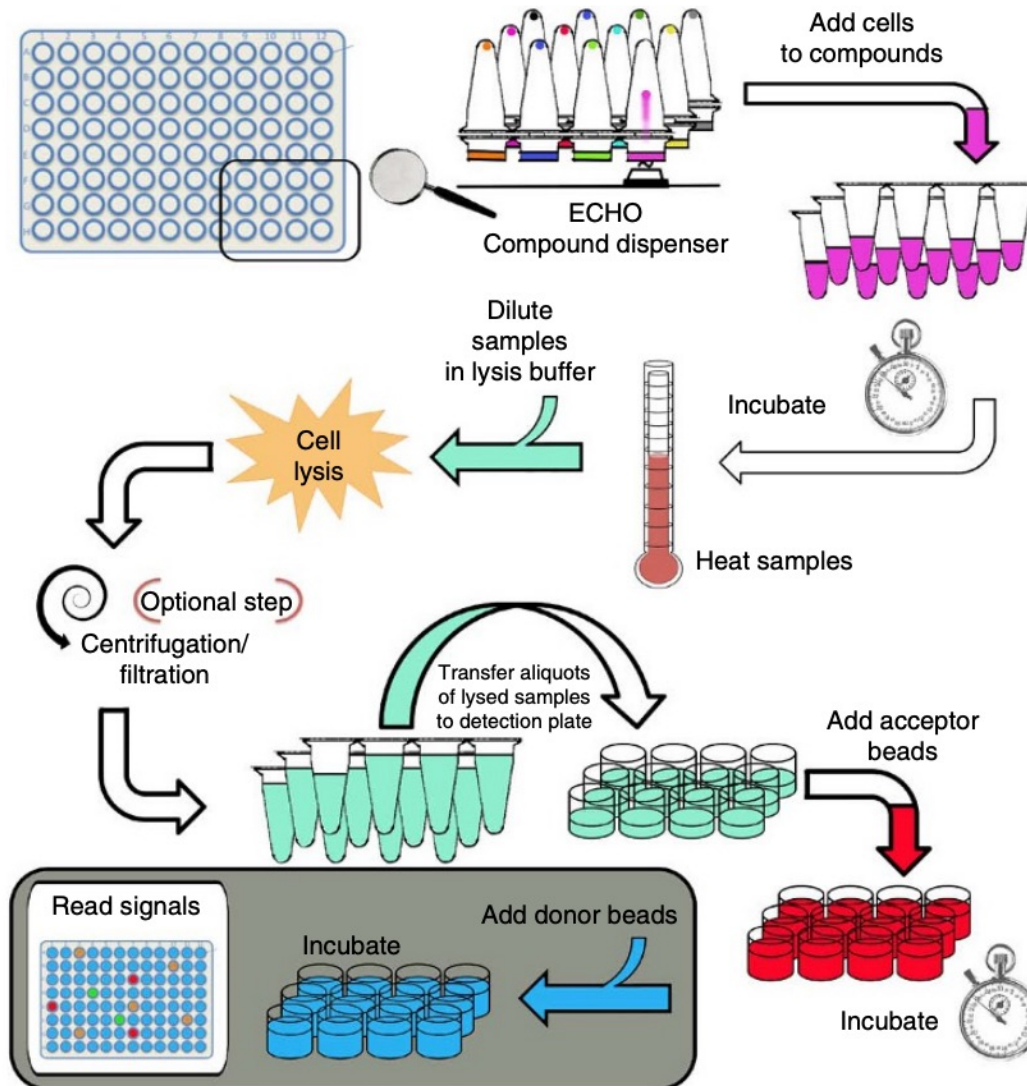
Where does your eye go with this figure?

Schematic example 2 of 2



Where does your eye go with this figure?

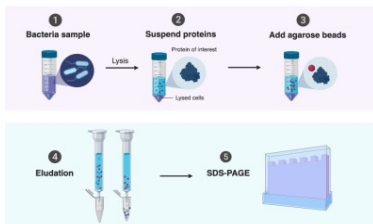
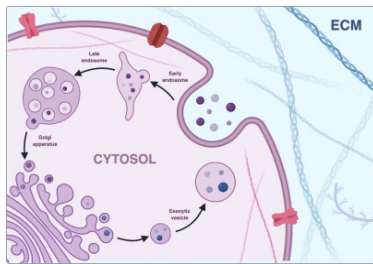
Schematic example 2 of 2



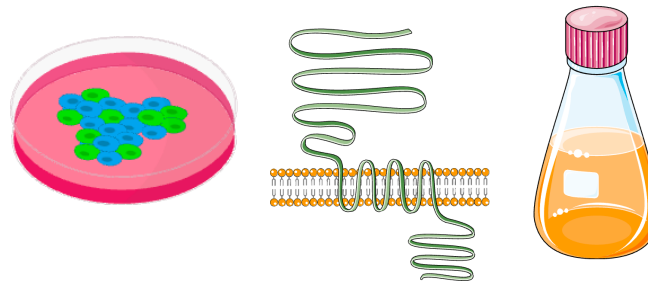
e.g. arrows direct reader's eye in how to proceed through multi-step diagram, lots of colors (could there be fewer?) make it harder for any one to stand out, some visual clutter with all the objects

You don't need to reinvent the wheel to make clear schematics!

Biorender



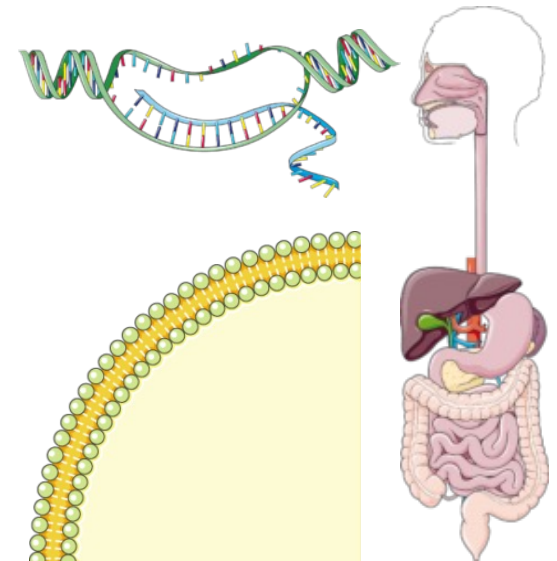
bioicons.com



Noun Project



Servier Medical Art



If you want to, now is a good time to try out some vector design programs

[Adobe Illustrator Intro Videos](#) — Free through MIT
(and the entire Adobe Suite)

(https://helpx.adobe.com/illustrator/how-to/ai-basics-fundamentals.html?playlist=/services/playlist.helpx/products:SG_ILLUSTRATOR_1_1/learn-path:get-started/set-header:ccx-designer/playlist:ccl-get-started-1/en_us.json&ref=helpx.adobe.com)

[BE Comm Lab Illustrator Guide](#)

<https://mitcommlab.mit.edu/be/2021/09/09/introduction-to-illustrator-and-helpful-resources/>

[Inkscape](#) — Free, open source

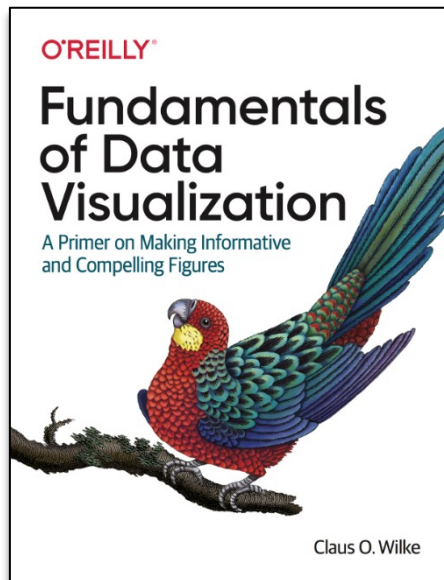
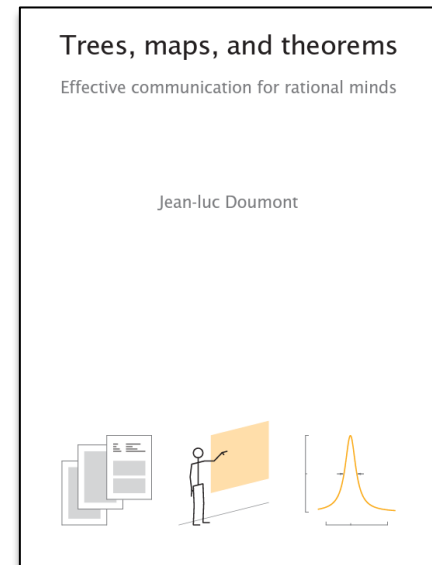
<https://inkscape.org/learn/tutorials/>

If you are interested in learning more about visual design / data visualization, check out:

Trees, Maps, and Theorems

Jean Luc Doumont

<https://www.principiae.be/book/X0301.php>



Fundamentals of Data Visualization

Claus O. Wilke

<https://clauswilke.com/dataviz/>

(full online textbook)

Resources

Please respect the copyrights and licenses of the creators

Data Visualization Checklist

Evergreen Data. “Stephanie Evergreen Data Visualization Checklist.” Accessed January 25, 2021. <https://stephanieevergreen.com/data-visualization-checklist/>.

Selecting A Visualization Type

- Search by Function: <https://datavizcatalogue.com/index.html>
- Search by Data Type: <https://www.data-to-viz.com/>
- Chart Chooser diagram: <https://www.labnol.org/software/find-right-chart-type-for-your-data/6523/>
- Visual Vocabulary: <http://ft-interactive.github.io/visual-vocabulary/>

Visual Encodings

- Properties and Best Uses of Visual Encodings: <http://complexdiagrams.com/properties>

Managing Color

- ColorBrewer 2.0: <http://colorbrewer2.org/>
- ColorLab Colorblindness Simulator: <http://colorlab.wickline.org/colorblind/colorlab/>
- I Want Hue color palette generator <http://tools.medialab.sciences-po.fr/iwanthue/>
- Colour Contrast Analyser (CCA): <https://developer.paciellogroup.com/resources/contrastanalyser/>

Examples

Schwabish, Jonathan A. “An Economist’s Guide to Visualizing Data.” *Journal of Economic Perspectives* 28, no. 1 (February 2014): 209–34. <https://doi.org/10.1257/jep.28.1.209>.

Schwarz, C J. “A Short Tour of Bad Graphs,” 2016, 29. <http://people.stat.sfu.ca/~cschwarz/Stat-650/Notes/PDF/ChapterBadgraphs.pdf>

“Top Ten Worst Graphs.” Accessed January 30, 2020. https://www.biostat.wisc.edu/~kbroman/topten_worstgraphs/.



Additional Resources

About the BE Communication Lab

56-211 Team



Dr. Chiara Ricci-Tam

BECL Manager
Lecturer



Dr. Sean Clarke

Principal Lecturer
Biotech Liaison



From early brainstorming to final edits, we offer **discipline-specific feedback** for your communication tasks



- **Written** (reports, manuscripts, proposals, theses)
- **Visual** (slide / poster / figure design)
- **Oral** (public speaking, presentation design)
- **Career** (application essays, cover letters, resumes, interviewing, networking)



Use our online guides any time!

mitcommlab.mit.edu/be

CommKit

GitHub Resources

Templates

Blog Posts

SEARCH THE SITE:

- Fellowship Applications**
 - Graduate School Personal Statement
 - NSF Personal Statement
 - NSF Research Proposal
 - Postdoc Fellowships: Index of Life Sciences Fellowships
 - AAAS STPF Applicant Statement
- Career Focused Tasks**
 - Cover Letter: For a Faculty Position
 - Cover Letter: General
 - CV/Resume
 - Elevator Pitch
 - Interviewing
 - Professional Bio
 - Professional Email
- Presentations**
 - Slideshow
 - Public Speaking
 - Virtual Presentations
- Poster Design**
 - Introduction to Poster Design
- Figure Design**
 - Introduction to Figure Design
- Manuscripts**
 - Abstract
 - Introduction
 - Methods
 - Results
 - Discussion
- MIT BE-specific**
 - BATS seminar
 - BE Undergraduate Research Symposium
- Science Policy**
 - Introduction to Policy Communication
- GitHub Resources**
 - Introduction to Resources
- Coding**
 - Coding, File Organization, and Documentation



Career Exploration

March 11, 2022

If you are starting to think about what you want to do with a degree in Biological Engineering, check out this post on career exploration. Learn about the various



Introduction to Illustrator and Helpful Resources

September 9, 2021

Vector images are an important component of figure design. While the learning curve is steep, Illustrator is the best way to make images. In this series of blog posts, we introduce you to Illustrator and the things you might need to know how



Asking for Recommendation Letters

July 20, 2021

Applying for graduate school or fellowships can be daunting. To make the process more stressful, we often need several letters of recommendation for a complete application. Below are some tips on who to ask and how to ask for a letter of recommendation.



MIT BIOLOGICAL ENGINEERING
COMMUNICATION LAB

Make a coaching appointment

mitcommlab.mit.edu/be



Our team of trained Comm Lab Fellows are available to help you revise, rehearse, and get a fresh perspective

Policies: what you can expect from **us**

- **Just-in-time** coaching: you can come to an appointment at any stage of your communication process (from early brainstorming to final revisions), and get help right at the time you need it
- Our goal is to **nurture, not evaluate**: we seek to provide an outside perspective and help you progress with **your communication goals**

Policies: what we expect from **you**

- Appointments need to be made **at least 1 day in advance**
- **Please respect the fellows time!** Show up on time, and give notice well in advance if you are going to be late or have to miss your appointment
- Double-check if you made an **in-person or virtual** appointment
- You gain more from a coaching session if you come into it with a goal for growth—**help us help you**

These resources are here to support you in your individual BE journey—reach out!



56-211 Team