The illustrated guide to a Ph.D.

[article index] [email me] [@mattmight] [rss]

Every fall, I explain to a fresh batch of Ph.D. students what a Ph.D. is.

It's hard to describe it in words.

So, I use pictures.

Read below for the illustrated guide to a Ph.D.

Update: Print version, slides and translations, CC licensing terms.

Update: I wrote a follow-up to this 5 years later -- HOWTO: Get tenure.

Imagine a circle that contains all of human knowledge:

By the time you finish elementary school, you know a little:
By the time you finish high school, you know a bit more:

With a bachelor's degree, you gain a specialty:
A master's degree deepens that specialty:

Reading research papers takes you to the edge of human knowledge:
Once you're at the boundary, you focus:

You push at the boundary for a few years:
Until one day, the boundary gives way:

And, that dent you've made is called a Ph.D.:
Of course, the world looks different to you now:

So, don't forget the bigger picture:
Keep pushing.

There's a bit more below, but I also wrote a follow-up 5 years after the illustrated guide which may be of interest – HOWTO: Get tenure.

**Related posts**

- HOWTO: Get tenure.
- Recommended reading for grad students.
- What every CS major should know.
- How to get into grad school.
- Advice for thesis proposals.
- Productivity tips for academics.
- Academic job hunt advice.
- Successful Ph.D. students: Perseverance, tenacity and cogency.
- The CRAPL: An open source license for academics.
- The shape of your problem.

If you like these posts, then I recommend the book *A PhD Is Not Enough:*
Get it in print; fund students; save lives

By request, a print version of *The Illustrated Guide to a Ph.D.* is on sale.

Click here to preview or buy it.

The Illustrated Guide to a Ph.D.

Matt Might

Any and all proceeds will fund graduate students whose work may impact the discovery, diagnosis or treatment of genetic disorders.

Any and all proceeds will fund graduate students (and postdocs) doing work in biology that may impact treatment of diseases of cellular metabolism.

**Update:** If you're interested in being that postdoc, get in touch with me!

It is available at $6.50 thanks to Hewlett-Packard's high-quality on-demand publishing service, MagCloud.

It's sixteen pages, saddle-stitch bound and in full color.
It's a good gift for new students, the recently defended and relatives thereof.

**Why biology?**

If you zoom in on the boundary of human knowledge in the direction of genetics, there's something just outside humanity's reach:

My wife and I chose to start funding these graduate students after we learned that our son has a rare, fatal genetic disorder.

It may be too late for my son, but it's not too late for other children.

Even one child suffering is one child too many.

The only way to end this kind of suffering is science.

And, the best way to do science is through graduate students.

**Update:** When I first wrote this post, my son's specific disorder was unknown. Thanks to a scientific advance made in genetic diagnostics—specifically exome sequencing—we were able to isolate the mutations in my son's genome and determine that he is the very first documented case of a new disease: N-glycanase deficiency.

One small dent in the circle of knowledge; one giant leap for my son.

You can read the full story in a new post: **Hunting down my son's killer.**

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And, of course, thank you for sharing!

**Resources**

Please let me know if you translate this post into another language.
• A slideshow version in PDF.
• French translation (by Sara Mathieu-C.)
• Urdu translation (by Adnan Masood)
• Japanese translation (by Kimikazu Kato)
• UK English "translation" (as interpreted by Gabriel Egan)
• Brazilian Portuguese translation (by Kleber Jacinto)
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• Belarussian translation.
• Catalan translation by Sebas Mas.
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• Basque Translation by Jesus Romo.