Presenting Your Thesis in 3 Minutes Or Less
How do you craft your message?
How do you tell a story?
How do you create visual aids that help?
Who is your audience and what is your communication goal?
The Circle of Knowledge
The Problem

The worldview of a scientist
The curse of knowledge
You can’t unlearn what you already know
Know thy audience!

What common ground do you have with them?
What is your goal?

THINK • FEEL • DO
What do you want them to think?

A starting goal:
Introduce a new point of view

An ambitious goal:
Challenge current believes
What do you want them to feel?

A starting goal: Spark curiosity

An ambitious goal: Inspire
What do you want them to do?

Starting goal:
Ask a question

An ambitious goal:
Change in behavior
Designing your message

What worked?
What didn’t work?
What did you take away?
Why do we tell stories?
What are the elements of a story?
Stories

help us remember
Data vs. narrative: 5% remember statistics

influence how we decide
“What if?” and imagination

help us see ourselves
Passion is a vital ingredient
Once upon a time...

One day, something happens

There was a terrible struggle... 
...and then something changed

A new challenge arises.

All of a sudden, CLIMAX! 
And the world was different.

(re)DREAM

MATURE

The Hero’s Journey
Innovation

Time

START

GROW

MATURE

(re)INVENT

A new question arises

You need a new vision to push the boundaries of knowledge

You think you die in the lab.... but - really - you're not

You arrive at a new insight

A new question arises

You think you die in the lab….

but - really - you're not

You need a new vision to push the boundaries of knowledge

The Scientific Process
1. Once upon a time

2. One day

3. But something happened

4. There was a terrible struggle

5. Then something changed

6. When all of a sudden...

    CLIMAX!

7. And as a result, the world was different!

SCIENCE IN A STORY

This is a story about __________________________________________
(hope, triumph, resilience, realization, commitment, partnership, loss, dreams, perspective, growing up, change, etc.)

My audience is ________________________________________________

My goal is __________________________________________________________________________

They would care because ________________________________________________________________
Story prompts

How did you become interested?
What’s weird or surprising?
What’s the tension?
What are your motivations? Hopes?
Endings matter

Resolved  Tie it up in a bow
Unresolved  Set it up for a sequel
Moral  Provide the lesson learned
Twist  Surprise them at the end
Crystal ball  Show them the future
Story pitfalls

The curse of knowledge

Awkward, forced or orphaned analogies

Lacking emotion
Don’t trouble with words
unless you are speaking to a blind man
Why think about design?

Design communicates
Design engages
Simplicity [sim-plis-i-tee] noun
Surface (non-sulfidic)

Surface (sulfidic)

Cave (non-sulfidic)

Cave (sulfidic)

Relative eye size
Eye diameter/standard length

$P < 0.001$
Choosing the right visuals depends on audience and context

Who?
Who is your audience? What’s your relation to the audience?

What?
What do you want your audience to think/feel/do?

How?
How are you communicating with your audience?
Visual representations need to be appropriate and honest.
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Minimize the audience’s cognitive load and eliminate distractions
Direct the attention of your audience

Make them see what you want them to see before they even know they are seeing it
Direct the attention of your audience

READ THIS FIRST

It’s the initial bit of narrative that you’ll absorb. The eye is drawn to it by its placement, but also by the use of a prominent heading that precedes the text.

This becomes secondary, but is still emphasized. It’s not unimportant. Visual hierarchy allows for much more content to be communicated and comprehended. There are lots of ways of introducing and exploring this approach to the visual communication of any type of content.
Think like a designer

Your visualizations should be intuitive, accessible, and aesthetic