

Writing through Infographics for the Sciences

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BCC Writing Across
The Curriculum
Workshop Series

What is an infographic?

- A clear and concise graphic, visual representation of information used to easily communicate data, patterns, and trends
- Effective as a tool for communicating ideas and displaying large amounts of information relatively quickly
- Combine text, graphics, and images together in a way that is aesthetically appealing and engaging

So You Want To Live Forever?

The dream of immortality is an enduring one. It's haunted the human imagination for millennia—just ask Ponce de León. But nowadays we seek the Fountain of Youth, not in the far corners of the Earth, but in the ingenuity of the human mind. Here's a look at the many ways scientists are attempting to extend human life.



Put It in the Cloud

Probably the most extreme solution to the problem of immortality is to simply download our minds into robotic vessels. The "Avatar Project," part of the 2045 Initiative, is already planning to transfer human consciousness into a non-biological substrate by mid-century. Aging will be a thing of the past—but what about our humanity?



Exchange It For a Newer Model

Cloning and stem cell technology may enable us to grow replacement organs and exchange them for old and damaged body parts—scientists at the Wake Forest Institute for Regenerative Medicine, for instance, have already created the first lab-grown organs to be implanted in human patients. Someday we may even clone entire bodies, and simply transplant our brains into a newer model.



Take a Pill

Certain pharmaceuticals, such as the diabetes drug metformin, could extend human lifespans by up to 50%. Drug companies like Gero are developing new anti-aging pills which will use so-called "geroprotectors"—compounds like carnosine, rapamycin, and metformin—to extend the youthfulness of tissues well into advanced age.



Become One With the Machines

One solution to the longevity problem could be the creation of human-machine hybrids or "cyborgs." Companies like SynCardia have developed artificial hearts that can keep recipients alive for up to four years—who knows, in the future we may swap failing organs piecemeal to become semi-immortal cybernetic organisms.

STRANGE UNIVERSE

9 Cosmic Conundra That Keep Scientists up at Night

We humans are an inquisitive lot. We want to know the how and the why of things, and so far we've done a pretty good job of sussing out the mysteries of the universe. But every solved question begets an unanswered enigma—and some of them are real doozies:

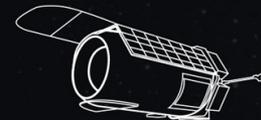
DARK ENERGY

Maybe it's an unknown force or energy, comprising about 70% of the universe. Possibly it's a mysterious property of gravity. Might even be the influence of unseen dimensions or universes. Oh, and it seems to be causing our universe to accelerate its expansion. Curiouser and curiouser...



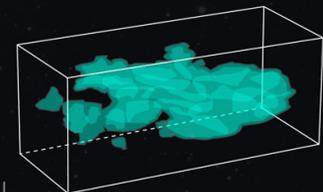
WFIRST Mid-2020s

NASA's Wide Field Infrared Survey Telescope is a proposed space telescope that will investigate whether cosmic acceleration is truly an energy or is a gravitational phenomenon.



DARK MATTER

Like dark energy, it inhabits the shadows of perception—its presence is inferred from its gravitational effects and nothing more. To explain it, physicists invoke WIMPs and MACHOs, axions and extradimensional matter, topological defects in spacetime and even the insufficiency of general relativity. But we're still in the dark...



Infographics as writing

- Students identify external sources (e.g., journal article) & properly cite them
- Infographics tell a story through an introduction, a main argument, and a conclusion
- Can be end product of research or inquiry process much like an essay

Critical thinking skills & infographics

- Infographics requires students to evaluate, analyze and synthesize assigned readings
- Requires summarization of critical course concepts
- Enhances long-term retention of information
- Provides synthesis of newly acquired and long-term knowledge
- Offers practice with communication skills

Scaffolding Infographics

- To scaffold an infographic as a final product of an inquiry process, steps could include:
 - **Research Stage:** Submission of an annotated bibliography, or first draft of infographic content
 - **Drafting Stage:** Students receive feedback on a draft of the infographic and/or its content from instructors or peers
 - **Designing Stage:** Students receive support on designing their infographic, through tutorials, peer support

Infographic rubric

- **Content:** accurate and detailed information is provided and supports the argument
- **Focus:** All content concisely complements the purpose of the infographic
- **Visual Appeal:** Fonts, colors, layouts, & visual elements contribute to the infographic's ability to convey the overall message
- **Argument:** The infographic effectively informs and convinces the reader of its intended purpose
- **Organization:** Information is systematically organized and supports readers' comprehension of the main message
- **Citation:** Full bibliographic citations

How to assign an infographic

- Find an infographic in your field to critique together as a class
 - Check out [Information is Beautiful](#) and [Daily Infographic](#)
- Provide students with criteria for assessing the written assignment (e.g., rubric)
- Let students select their platform (tool) for building their infographics but provide them with some options:
 - Check out Infogr.am, Easelly, Piktochart, and Visme

Example Assignment



Group Assignment 2: Create an infographic aimed at changing health behaviors

Your task as a group will be to create an infographic on the importance of wearing a face mask to decrease the risk of COVID-19 transmission. Imagine that this infographic will be displayed at Hunter when we resume in-person classes.

USE THEORY & SCIENTIFIC EVIDENCE TO CREATE YOUR INFOGRAPHIC

- Ask yourself, do you want to change behaviors in short- or long-term?
- Would it be best to use gain-framed or loss-framed messaging? Why?
- Which health behavior change model would you use, and why?

6. *Introduction & Adaptation to chronic illness: Cancer*

Thursday 10/1 *Lecture 2: Models & Theories of Health Behavior Change*

Monday 10/5 *Lecture 1: Intervention Development: Translating Research into Practice*

7.

Thursday 10/8 *Lecture 2: Understanding and Managing Pain*

Example Assignment



Requirements

Create an eye-catching, colorful, neat INFOGRAPHIC to communicate information. The following is a list of REQUIRED elements:

- Main title
- Eye catching section headings (at least THREE)
- Minimum of THREE colors
- Minimum of ONE graph/chart
- Minimum of FOUR graphics related to the topic (pictures, illustrations, clipart)
- Minimum of EIGHT facts on the INFOGRAPHIC
- Identify the non-fiction source analyzing and summarizing the information you gathered (e.g. CDC, WHO, New York City Department of Health, scientific article)
- Identify what theory of health behavior (e.g. Health Beliefs Model) and message framing strategy (e.g. gain-frame, personalized) you used for this infographic and why you chose that strategy over others.

Example Assignment: Scaffolding

	NOTES AND INFORMATION
Overall message, topics or theme (analysis/summary of the information you plan to include in the INFOGRAPHIC)	
Facts (at least eight relevant facts) to support the topic.	<ol style="list-style-type: none"> 1. 2. 3. 4. 5. 6. 7. 8.
Identify the Theory of Health Behavior and Message Framing strategies used and <u>WHY YOU CHOSE THEM</u>	
Source(s) of information. List complete web address, journal article, book, magazine, or any source of	

Many thanks!

