



Extension Speaks Learning Series

Graphic Design for Extension: Tips to Elevate Any Outreach Material



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**Outreach
needs**



**Information
processing**



**Multimedia
design**



**Graphic
Design tips**

Innovative Media Research & Extension

New Mexico State University



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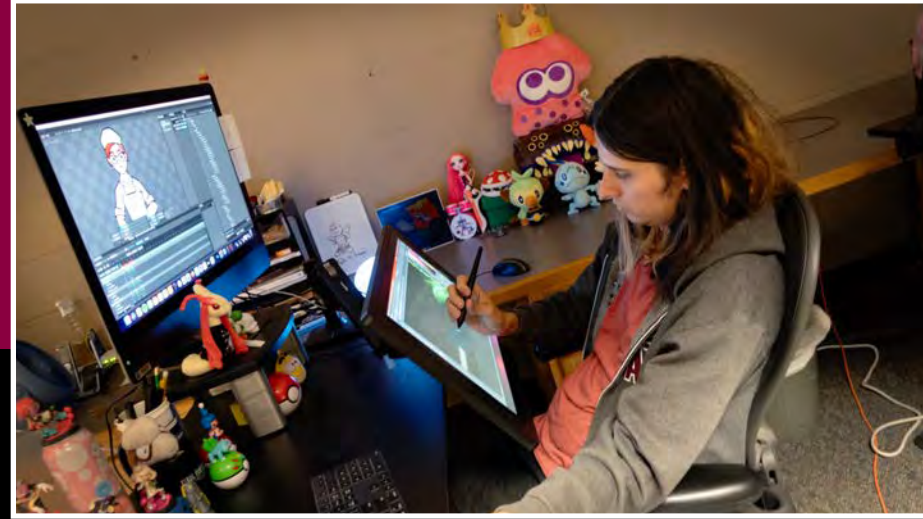
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**Artists/animators
Programmers
Instructional designers
Web designers
Video team
Social media team**

innovativemediablog.nmsu.edu

COLLEGE OF AGRICULTURAL, CONSUMER, AND ENVIRONMENTAL SCIENCES | ACADEMICS | RESEARCH | EXTENSION & OUTREACH | ACES LINKS

New Mexico State University
Innovative Media Research and Extension

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Innovative Media Research and Extension

As part of New Mexico's largest Land-Grant University, we serve the Cooperative Extension Service by producing educational media. Here, you'll find our hundreds of animations, videos, games, apps, interactive modules, and websites. Our faculty also conduct research on media development in our Learning Games Lab and support meaningful uses of technology in New Mexico. Cooperative Extension, the Innovative Media Research and Extension main office is on the NMU main campus in Gerald Thomas Hall, room 236, and the Learning Games Lab is in Gerald Thomas Hall, room 173.

Learn about the 20th Anniversary of our Learning Games Lab!



Featured Products

To explore more of our work, please visit Our Products.



Night of the Living Debt

Survive the zombie outbreak by managing your finances. Do you have what it takes? Get college loans, buy a car, buy a house! It's your decision. In Night of the Living Debt, manage your finances or be eaten alive by bad credit.



Theme Park Kitchen

The game teaches food safety in engaging ways and helps youth internalize safe practices around cooking and food handling. Theme Park Kitchen is great to play in the classroom, at home, or as part of 4-H or Extension programs.



Land Grant Universities and Extension

Besides teaching and research, some universities have an important third mission: to bring research-based knowledge directly to families, consumers, business owners, and agricultural producers.



Produce TRAINER

A food safety training tool for produce farm workers, with lessons and scenarios to practice risk assessment on the farm. Learn about how decision making and Standard Operating Procedures help keep you and the produce you work with safe.

InnovativeMedia.nmsu.edu

innovativemediablog.nmsu.edu

JOURNALS | pale | housing 2 | housing | GB | Rent | NSF review | Baking

NM STATE MEDIA PRODUCTION
Innovative Media Research & Extension
& the Learning Games Lab

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Innovative Media Research & Extension is a department of New Mexico State University's College of ACES. The department conducts research and produces videos, animations, games, interactive modules and apps. The Learning Games Lab is our development studio and a space for research, user testing, and outreach.

All Posts Video & Animation Web Games News Extension Resources More



Social Media Content Creation
Quick Campaigns From What You Already Have

jeffrey Buras
7 days ago

Social Media Content Creation



Statewide Agricultural Forecasting for Sustainable Growth

Art Rulisa
Sep 30

Statewide Agricultural Forecasting for Sustainable Growth

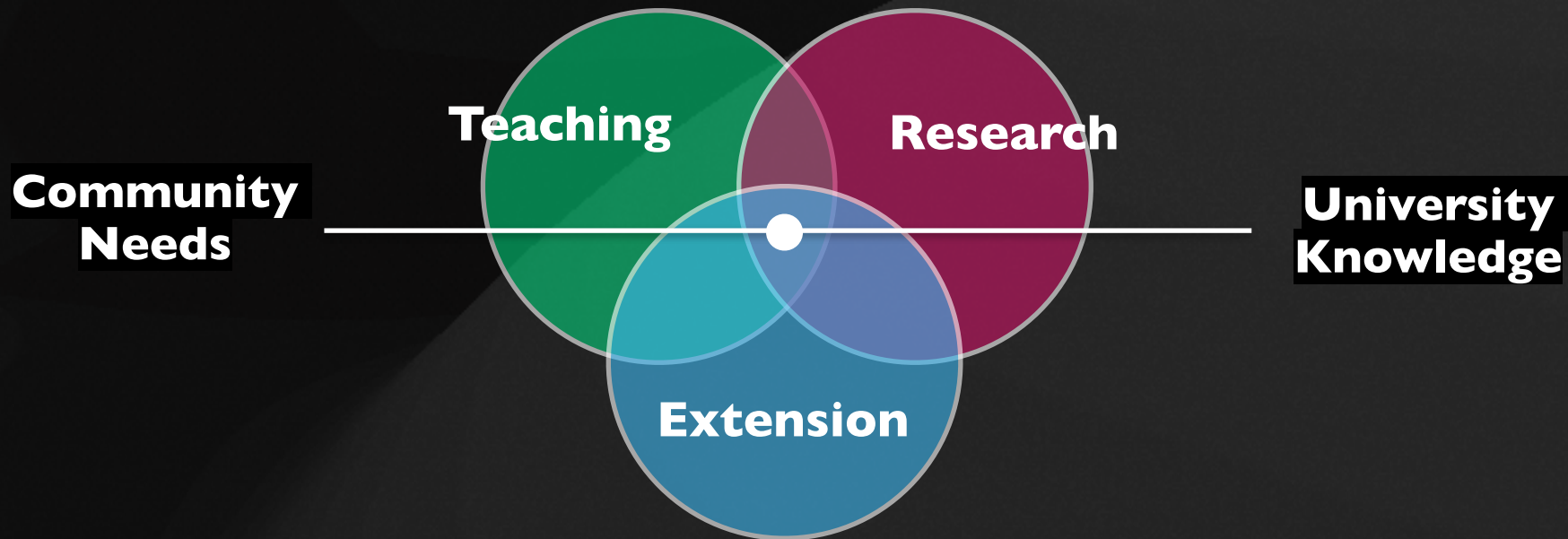


What We've Learned About VR: A Brief Taxonomy of VR, Part 1

John "CC" Chamberlin
Sep 29

What We've Learned About VR: A Brief Taxonomy of VR, Part 1

InnovativeMediaBlog.nmsu.edu



Outreach activities

Presentations

Videos/Photos

Workshops

Training sessions

Social media posts

Promote events

Educational purposes

Learner-centered
(Who is your audience?)

What do you want
communicate?

Type in chat

What software do you use to design things?

Adobe
creative cloud



Canva



Other

...

GENETIC IMPROVEMENT FOR SUSTAINABLE NEW MEXICO CROP PRODUCTION

PROJECT OVERVIEW

Breeding and Germplasm Development

- Create new crop cultivars to address environmental challenges

Key Improvements:

- Enhance yields, quality, and disease resistance

Benefits for New Mexico:

- Increased sustainability in crop production
- Economic gains for farms, supporting industries, and state clientele

PRINCIPLE INVESTIGATORS

Dr. Stephanie Walker

Dr. Jennifer Randall

Dr. Dennis Lozada

Dr. Chris Cramer

Dr. Naveen Puppala

Dr. Joanie King

Dr. Matheus Cezarotto

CHILE PEPPERS

- Developing drought-resilient cultivars using genomic tools
- Optimizing based drought screening in greenhouse trials (0%, 15%, 30% PEG)
- Testing five *Capsicum* genotypes (New Mexican, jalapeño, serrano) for germination-linked drought resistance



VALENCIA PEANUTS

- Focus on improving yields (low compared to other types) under declining irrigation in NM/TX/OK.
- 2024 trials identified high-yielding advanced lines with preferred traits (3-4 seeded pods, red skin, sweet taste)
- Three promising drought-tolerant lines selected; validation in 2025 trials



PECANS

- Investigated genetic diversity and stress responses (heat, drought, salinity)
- Screened six genotypes under 110° F heat
- Northern-origin trees showed leaf scorching, while southern-origin were more tolerant
- RNA-Seq identified heat-responsive genes and potential tolerance networks
- Salt/drought studies revealed physiological and genetic differences; linked genes to salt tolerance.
- Studying zinc uptake under heat stress to improve nutrient efficiency



SHORT-DAY ONIONS

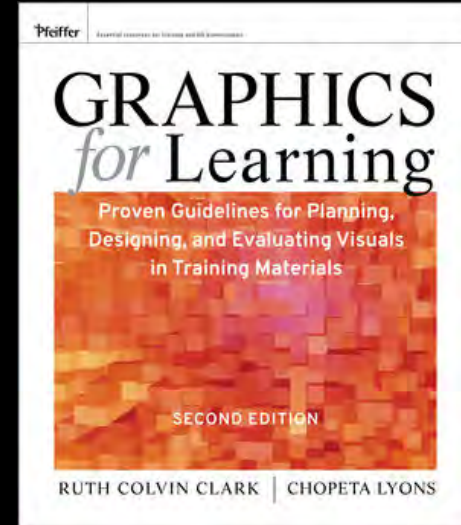
- Targeted Fusarium basal rot resistance, but screening challenges hindered clear differentiation
- Evaluated thrips resistance and Iris yellow spot symptoms; some lines showed reduced susceptibility
- Assessed mechanical harvesting suitability in 28 cultivars—found trade-offs between bulb size and firmness
- Hosted Onion Research Workshop at NMSU

New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and the U.S. Department of Agriculture cooperating.



How learning happens?

“A transformation of new information from the environment into long-term memory.”

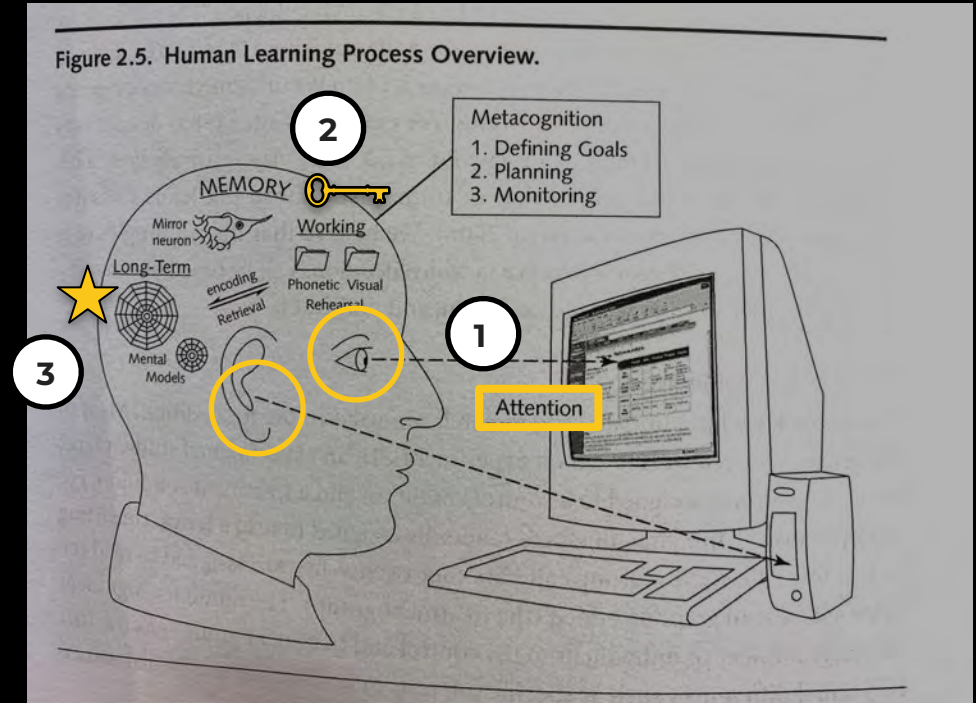


(Clark and Lyons, 2011)

Meaningful Learning

Attention

(Clark and Lyons, 2011)



Dehaene (2020)

Meaningful Learning

Attention



7 +/- 2

The limits of humans working memory

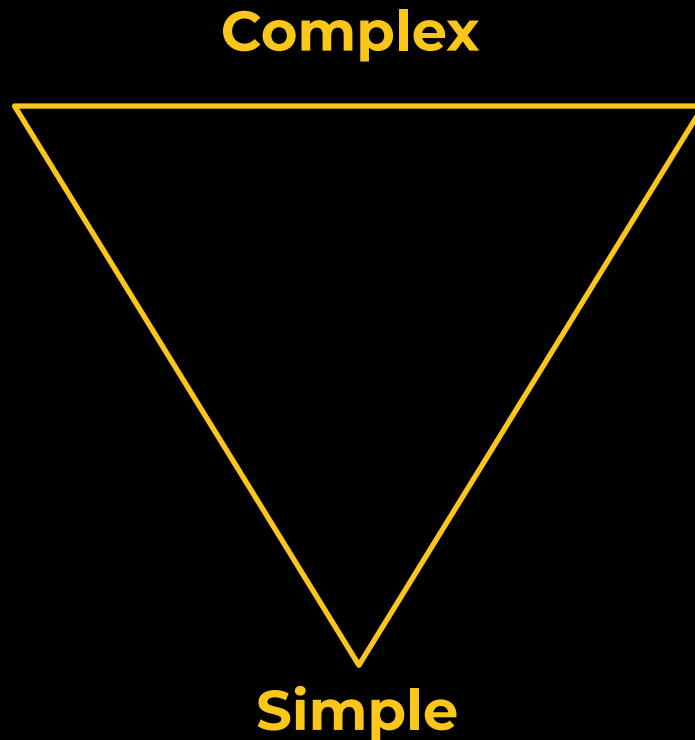
(Clark and Lyons, 2011)

Information
processing

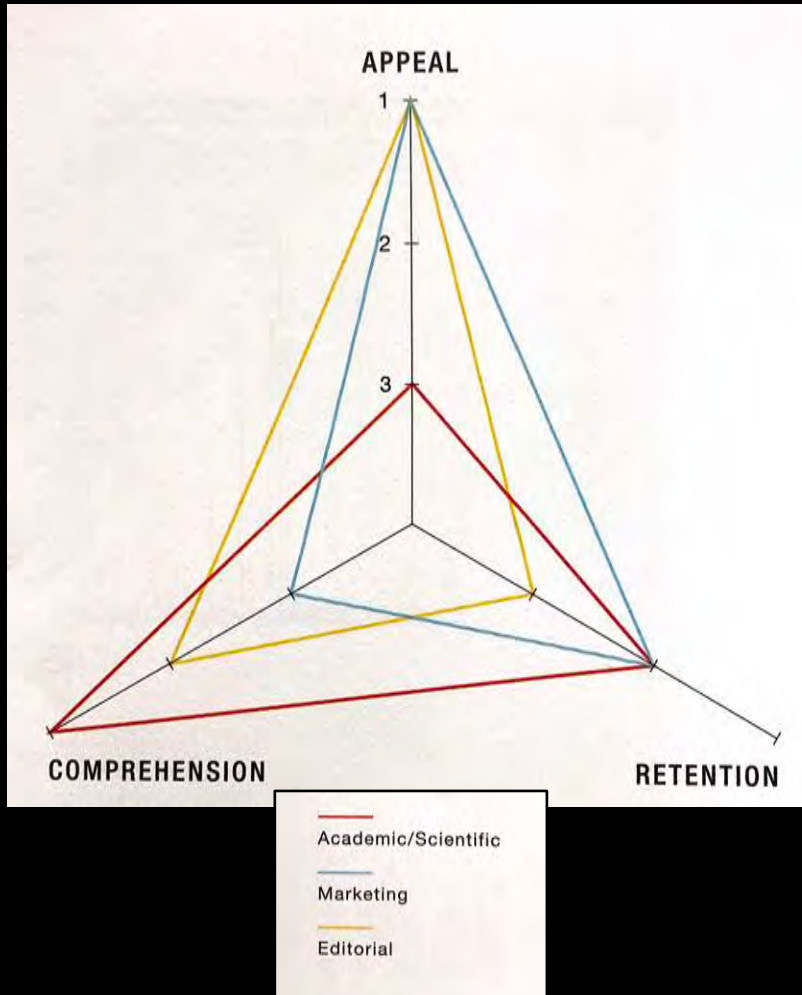
Dehaene (2020)

Meaningful Learning

Attention



(Pettersen, 2010)



Learner-centered (Who is your audience?)



(Lankow, Ritchie & Crooks, 2012)

(Mayer, 2021)

Multimedia Learning Theory

WORDS

Verbal
representation

**Narration
Written text**

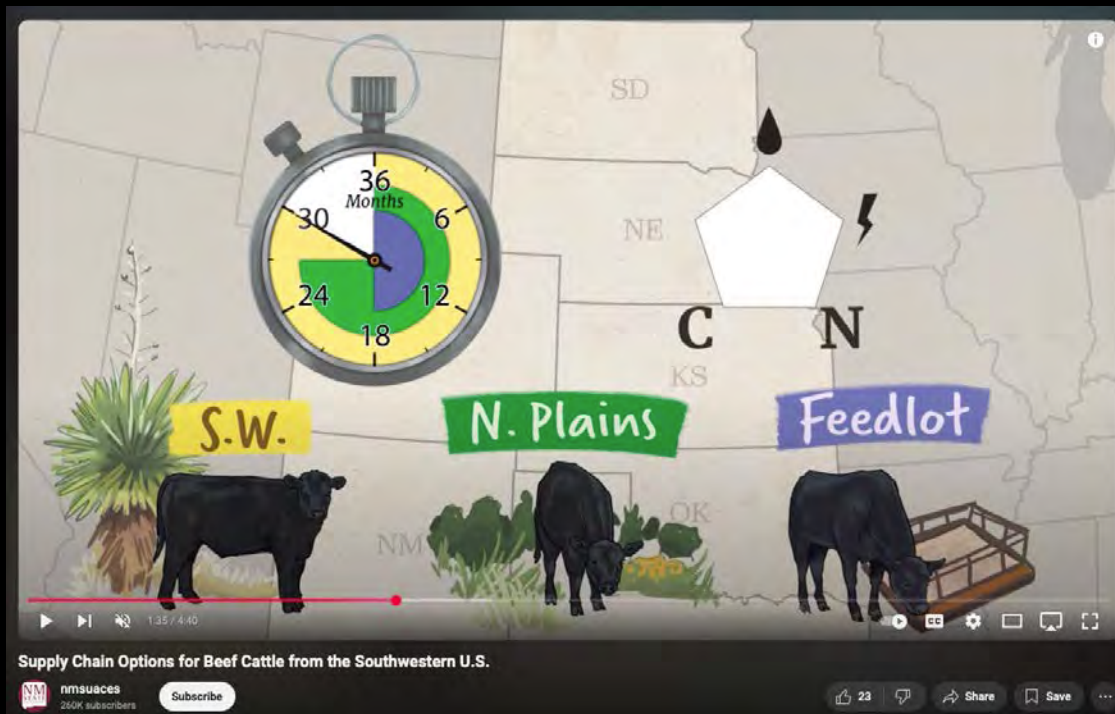
+

IMAGES

Pictorial
representation
(non-verbal)

**Picture
Drawings
Graphics
Animations
Videos**

Animation or Video



WORDS

+

IMAGES

innovativemedia.nmsu.edu/products/videos.html

Animation or Video



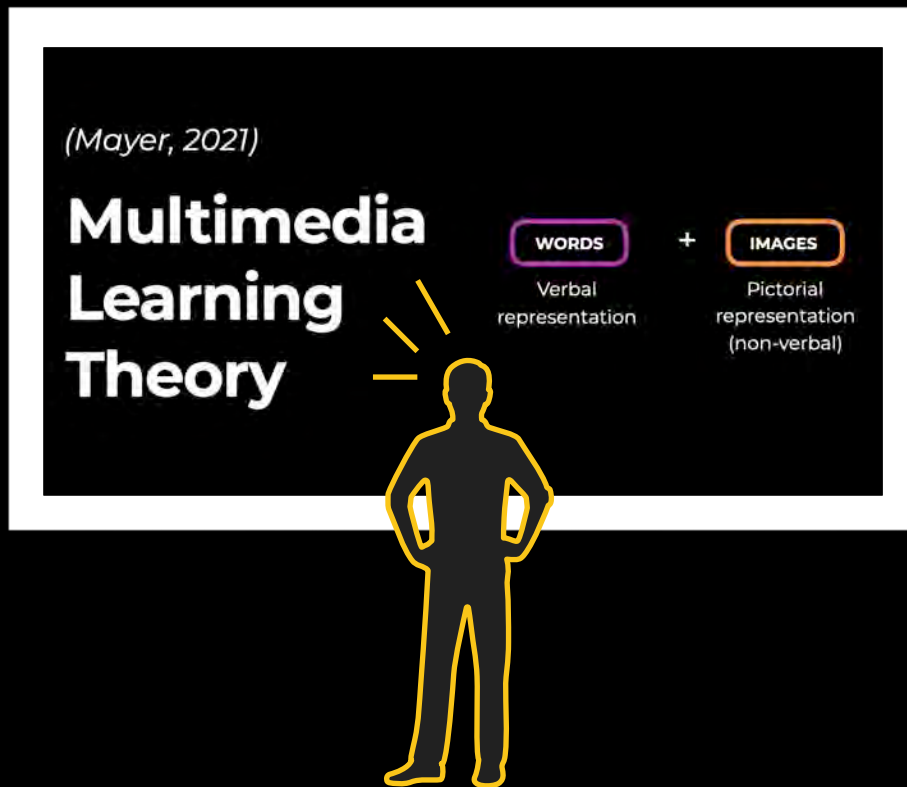
itipsFoodSafety.com

WORDS

+

IMAGES

Slide presentation



WORDS

+

IMAGES

Interactive module or game



WORDS

+

IMAGES

FarmSanitizing.nmsu.edu

Social media post



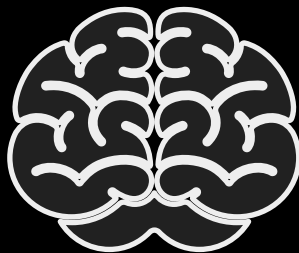
WORDS

+

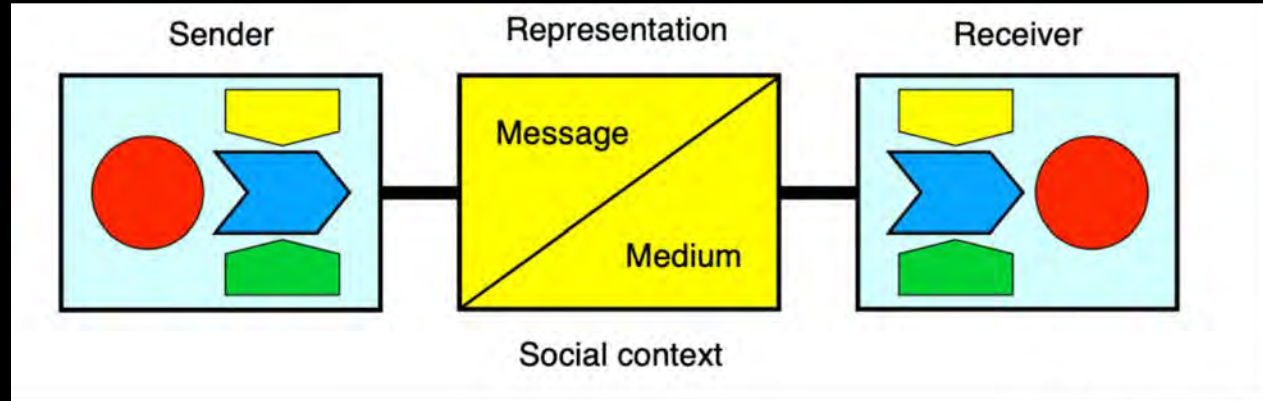
IMAGES

Active processing

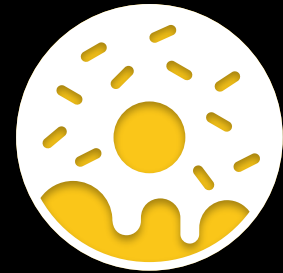
(Mayer, 2009, Wittrock, 1989)



- 1. Receive information**
- 2. Select information**
- 3. Organize information**
- 4. Integrate information**



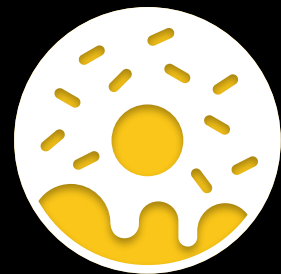
(Pettersson, 2012)



**Make it
engaging!**



**Dive and
understand**
who is your
audience

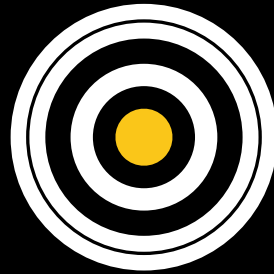


**Make it
engaging!**

Graphic Design



**Dive and
understand**
who is your
audience



Intention
What do you
want to
communicate



**Make it
engaging!**



Graphic Design Tips

- 1. Color Contrast**
- 2. Color Palette**
- 3. Fonts**
- 4. Hierarchy**
- 5. Legibility**
- 6. Appeal**

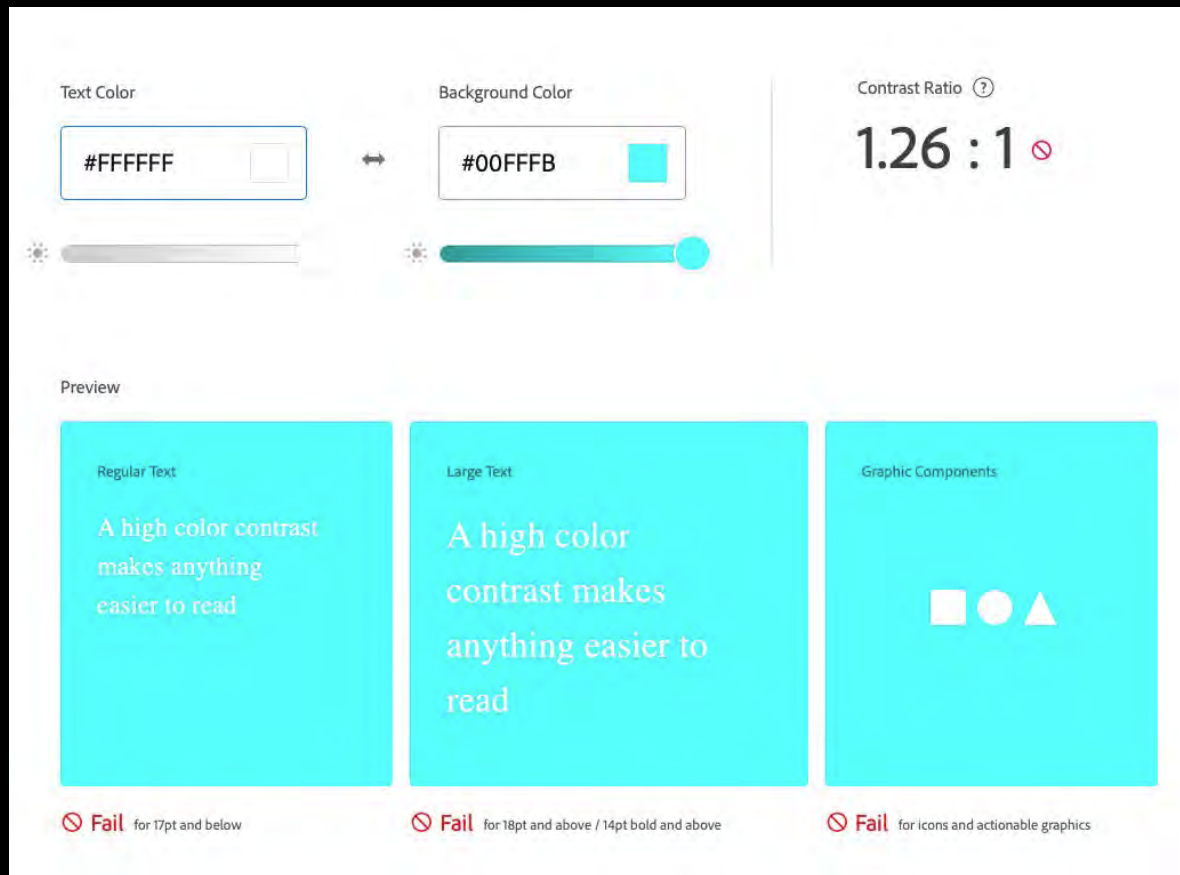
1. Color Contrast



1. Color Contrast

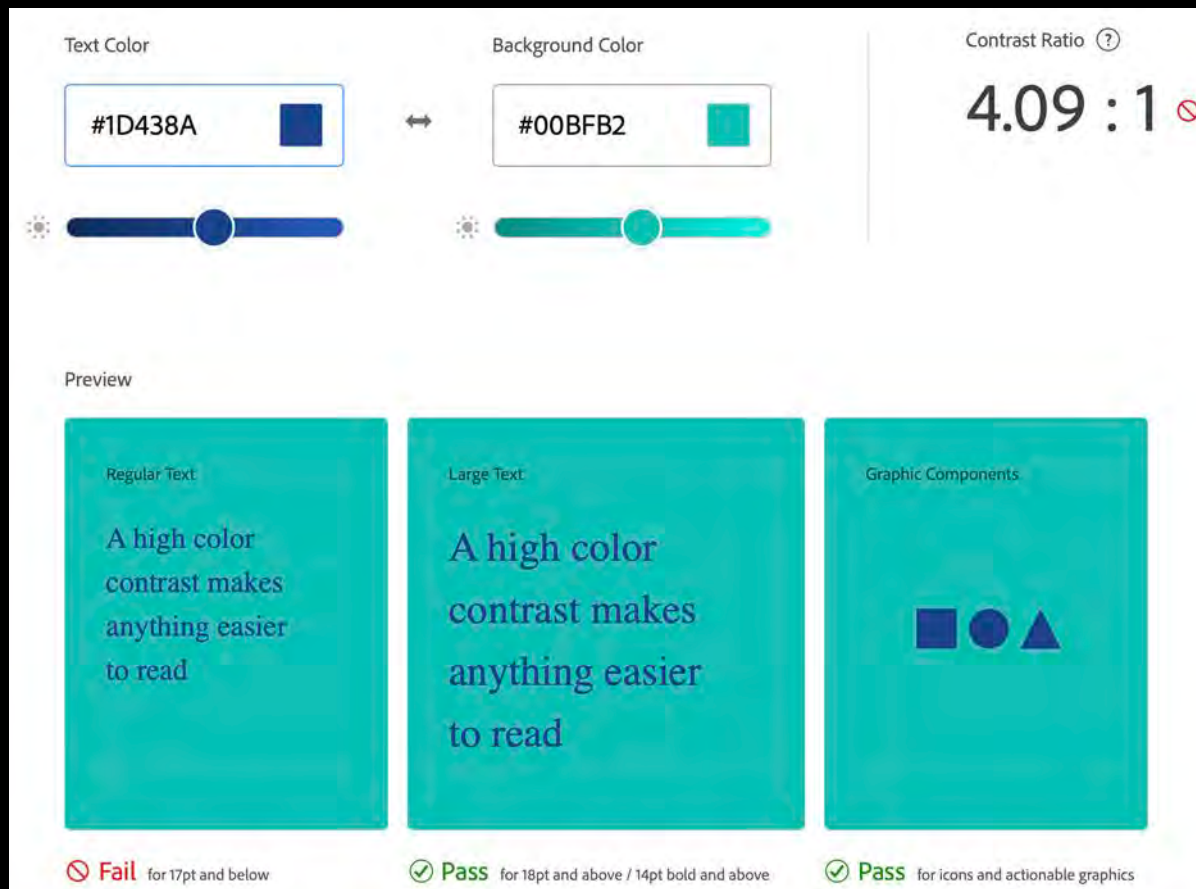


1. Color Contrast



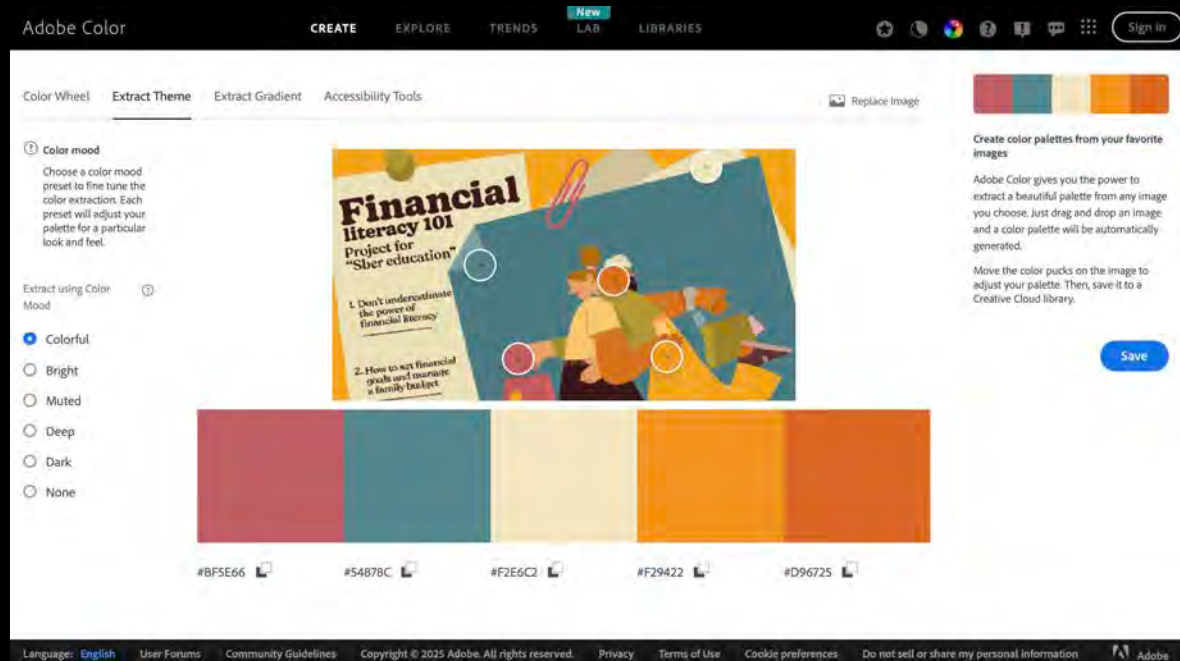
<https://color.adobe.com/create/color-contrast-analyzer>

1. Color Contrast



<https://color.adobe.com/create/color-contrast-analyzer>

2. Color Palette



<https://color.adobe.com/create/image>

3. Typeface



3. Typeface

Title
Text

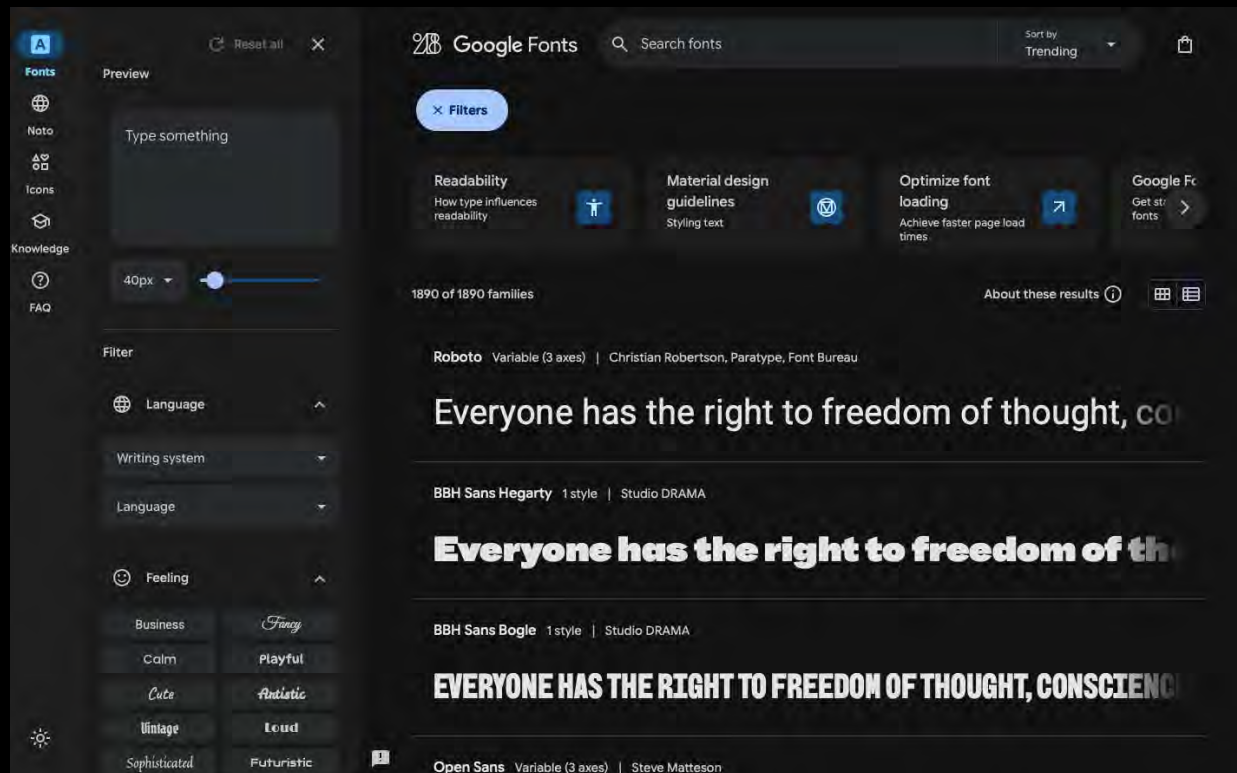
Title (bold)
Title (regular)
Title (italic)

✓ Montserrat
Caecilia LT Pro
Proxima Nova
Helvetica Neue
Gill Sans
Georgia

✓ Regular
Italic
Thin
Thin Italic
ExtraLight
ExtraLight Italic
Light
Light Italic
Medium
Medium Italic
SemiBold
SemiBold Italic
Bold
Bold Italic
ExtraBold
ExtraBold Italic
Black
Black Italic

3. Typeface

<https://fonts.google.com/>



3. Typeface

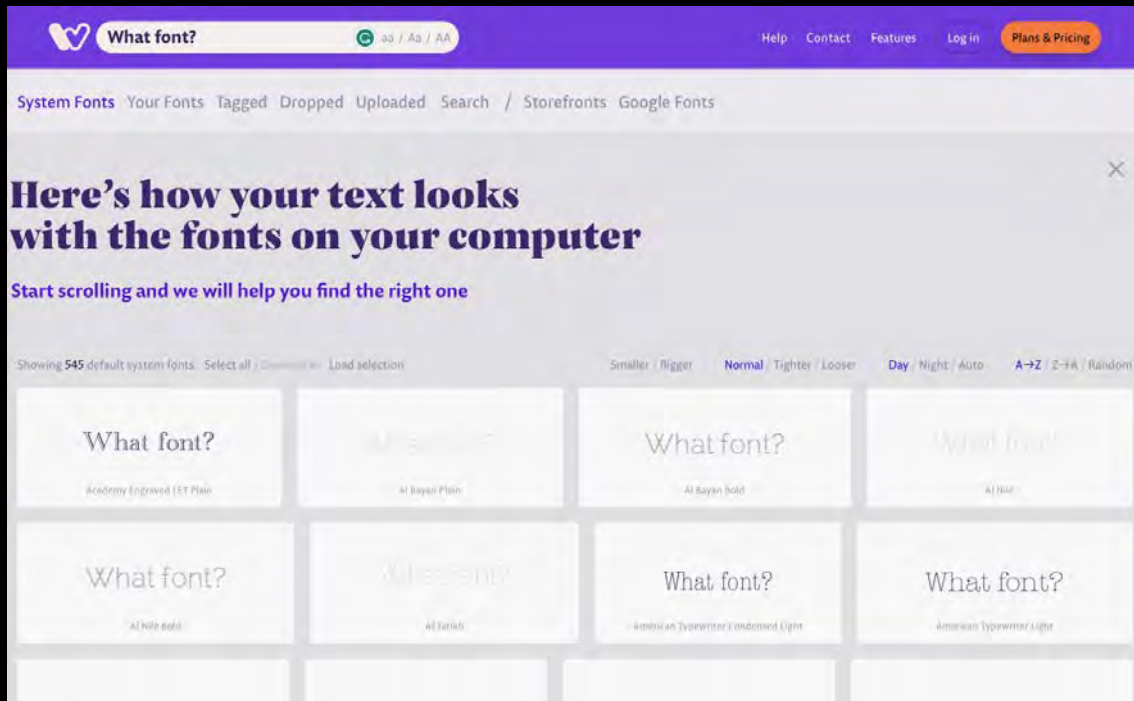
Avoid: Too many fonts (max 2)

 Comic Sans MS

 APPLE
CHANCERY

3. Typeface

<https://wordmark.it>



4. Hierarchy

Provide structure

Emphasis

Sequence

Connections

Size

Bigger text

Smaller text

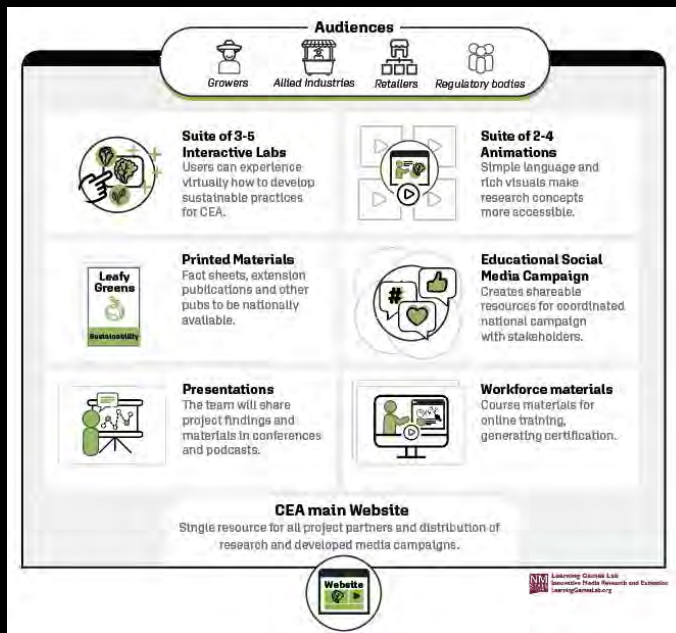


4. Hierarchy

Provide structure
Emphasis
Sequence
Connections

Font style

Bold
Regular or thin



4. Hierarchy

Provide structure

Emphasis

Sequence

Connections

Color

Different Colors

$5 \times (x + 1) - y$			
Three operations	Two numbers	Two variables	One set of parentheses
$5 \times (x + 1) - y$	$5 \times (x + 1) - y$	$5 \times (x + 1) - y$	$5 \times (x + 1) - y$

4. Hierarchy

Provide structure
Emphasis
Sequence
Connections

Shapes

Shapes



5. Legibility

People can read
& understand better

Line width



Line width: lines that are too long make the reading slow and harder for people



Line width:
lines too short
make the
reading slow



Line width: Find the balance to
make the ready easier

5. Legibility

People can read
& understand better

Space between lines:



Space between lines: pay attention to space between your paragraph lines.



Space between lines: pay attention to space between your paragraph lines.



Space between lines: pay attention to space between your paragraph lines.

5. Legibility

People can read
& understand better

ALL CAPS: can reduce
13 to 20% the reading
speed.

Bold: it's better to
emphasize content.

Font style: Different
font styles are better
perceived by the readers
than different fonts.

Title

Lorem ipsum dolor sit amet,
consectetur adipiscing elit, sed
do **eiusmod tempor incidunt**
ut labore et dolore magna aliqua.
Ut enim ad minim veniam, quis
nostrud exercitation ullamco
laboris nisi ut aliquip ex ea
commodo consequat.

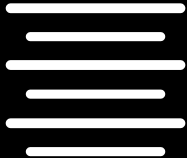


Lupton 2024

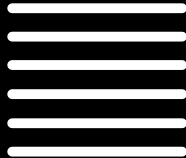
5. Legibility

People can read
& understand better

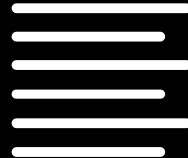
Centered



Justified



Flush left/rag right



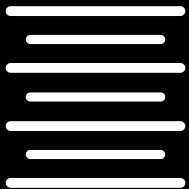
Flush right/rag left



5. Legibility

People can read
& understand better

Centered



Lupton 2024

CENTERED TEXT is symmetrical, like
the facade of a classical building.

This style often appears on

invitations, title pages, certificates,
and **gravestones.**

A centered column can be
dramatically uneven.

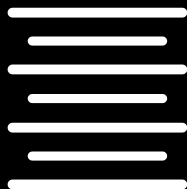
Centered lines should be broken to
emphasize key phrases (such as the
name of a bride or the date of a
wedding) or to allow a new thought to
begin on its own line.

Breaking lines in this manner is called
breaking for sense.

5. Legibility

People can read
& understand better

Centered



A small amount of text
Headings
Content under headlines

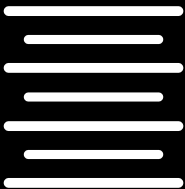


Long paragraphs

Type + Paragraph

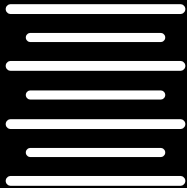
Columns

Centered



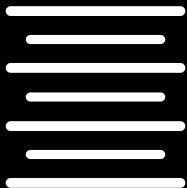
Type + Paragraph Columns

Centered



Type + Paragraph Columns

Centered



Design students looking for guidance on basic information design concepts and how to build foundational skills.

Instructors in design programs who want a starting point to structure a course or supplement a class.

Early- to mid-career designers seeking a reference book on information design with plenty of case studies.

Anyone curious about the field who wants a broad overview and practical tips for everyday communication.

Key Features



400+

color images and
instructive illustrations



36

engaging exercises to
practice key lessons



13

in-depth case studies
from around the world

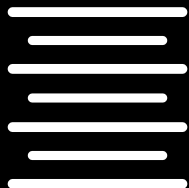
PART 1

CONTEXT

The book opens with a big picture overview of the field across its historical, professional, scientific, and cultural dimensions.

Type + Paragraph Columns

Centered



x

Did the Gettysburgh Address Remake American Politics?

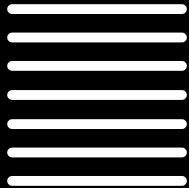
Four score and seven years ago our fathers
brought forth on this continent, a new nation,
conceived in Liberty, and dedicated to the
proposition that all men are created equal.

Now we are engaged in a great civil war,
testing whether that nation, or any nation so
conceived and so dedicated, can long endure.
We are met on a great battle-field of that war.
We have come to dedicate a portion of that
field, as a final resting place for those who
here gave their lives that that nation might live.
It is altogether fitting and proper that we
should do this.

5. Legibility

People can read
& understand better

Justified

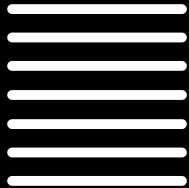


JUSTIFIED TEXT has even edges along both sides of the column. Justified text has been the norm in Latin typography since Gutenberg. In metal typesetting, printers can justify each line by hand, using small metal spacers to alter the gaps between words and letters and thus make all the lines the same length. Hyphenation breaks words that don't fit at the end of a line. Digital typesetting performs this labor automatically. The justified type makes efficient use of space. It also creates a crisp shape on the page.

5. Legibility

People can read
& understand better

Justified

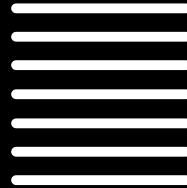


JUSTIFIED TEXT has even edges along both sides of the column. Justified text has been the norm in Latin typography since Gutenberg. In metal typesetting, printers can justify each line by hand, using small metal spacers to alter the gaps between words and letters and thus make all the lines the same length. Hyphenation breaks words that don't fit at the end of a line. Digital typesetting performs this labor automatically. The justified type makes efficient use of space. It also creates a crisp shape on the page.

5. Legibility

People can read
& understand better

Justified



Books and newspaper
(About 10 words per line)

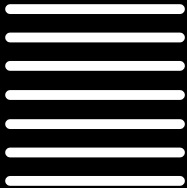


Websites or more dynamic layouts

5. Legibility

People can read
& understand better

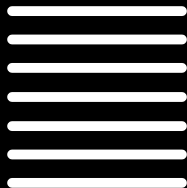
Justified



5. Legibility

People can read
& understand better

Justified



The Designer-Reader-Data Trinity

It is useful to think of an effective explanatory data visualization as being supported by a three-legged stool consisting of the designer, the reader, and the data. Each of these “legs” exerts a force, or contributes a separate perspective, that must be taken into consideration for a visualization to be stable and successful. [Chapter 2](#) will address the considerations of each of the three in much more detail, but we find it helpful to introduce the concept here.

Each of the three legs of the stool has a unique relationship to the other two. While it is necessary to account for the needs and perspective of all three in each visualization project, the dominant relationship will ultimately determine which category of visualization is needed (see [Figure 1-4](#)).

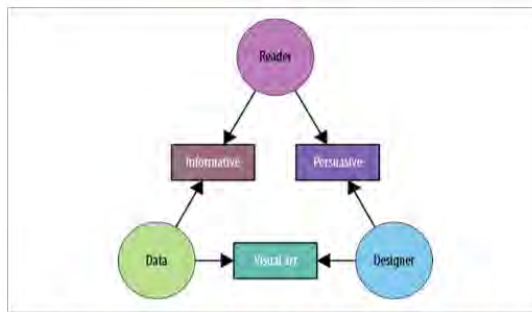


Figure 1-4. The nature of the visualization depends on which relationship (between two of the three components) is dominant.

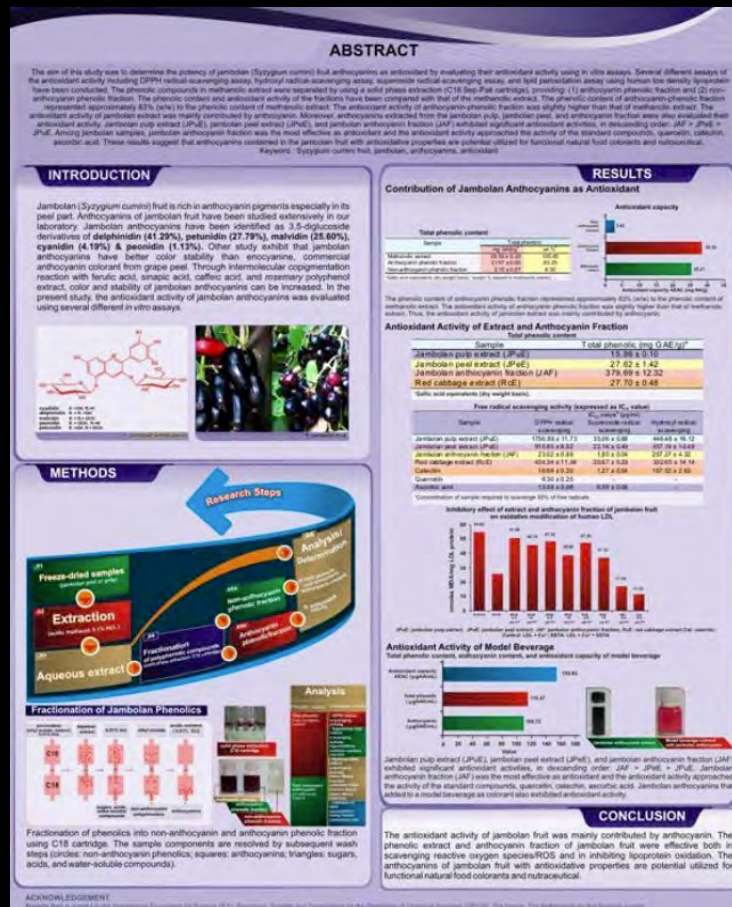
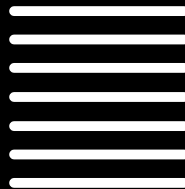
Informative

An *informative* visualization primarily serves the relationship *between the reader and the data*. It aims for a neutral presentation of the facts in such a way that will educate the reader (though not necessarily persuade him). Informative visualizations are often associated with broad data sets, and seek to distill the content into a manageably consumable form. Ideally, they form the bulk of visualizations that the average person encounters on a day-to-day basis—whether that’s at work, in the newspaper, or on a service-provider’s website. The Burning Man Infographic ([Figure 1-2](#)) is an example of informative visualization.

5. Legibility

People can read & understand better

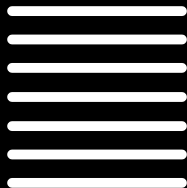
Justified



5. Legibility

People can read
& understand better

Justified



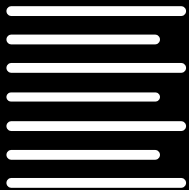
"In the nineteenth century, which was a dark and inflationary age in typography and type design, many compositors were encouraged to stuff extra space between sentences. Generations of twentieth-century typists were then taught to do the same, by hitting the spacebar twice after every period. Your typing as well as your typesetting will benefit from unlearning this quaint Victorian habit."

"In the nineteenth century, which was a dark and inflationary age in typography and type design, many compositors were encouraged to stuff extra space between sentences. Generations of twentieth-century typists were then taught to do the same, by hitting the spacebar twice after every period. Your typing as well as your typesetting will benefit from unlearning this quaint Victorian habit."

5. Legibility

People can read
& understand better

Flush left/rag right

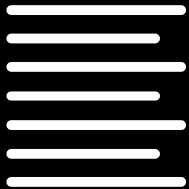


FLUSH-LEFT TEXT has a hard left edge and a soft right edge. Word spaces do not fluctuate, preventing big holes from violating the text block. **This format honors** the flow of language over the law of the box. The right edge should be uneven, forming a gentle rag with minimal hyphenation and no lines that are excessively long or short. A rag is considered "bad" when it looks too even or too uneven, or when it begins to form strong shapes, such as wedges, moons, stair steps, or diving-boards.

5. Legibility

People can read
& understand better

Flush left/rag right

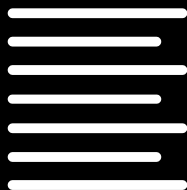


FLUSH-LEFT TEXT has a hard left edge and a soft right edge. Word spaces do not fluctuate, preventing big holes from violating the text block. **This format honors** the flow of language over the law of the box. The right edge should be uneven, forming a gentle rag with minimal hyphenation and no lines that are excessively long or short. A rag is considered "bad" when it looks too even or too uneven, or when it begins to form strong shapes, such as wedges, moons, stair steps, or diving-boards.

5. Legibility

People can read
& understand better

Flush left/rag right



Make it easier to read,
Headings, body text...

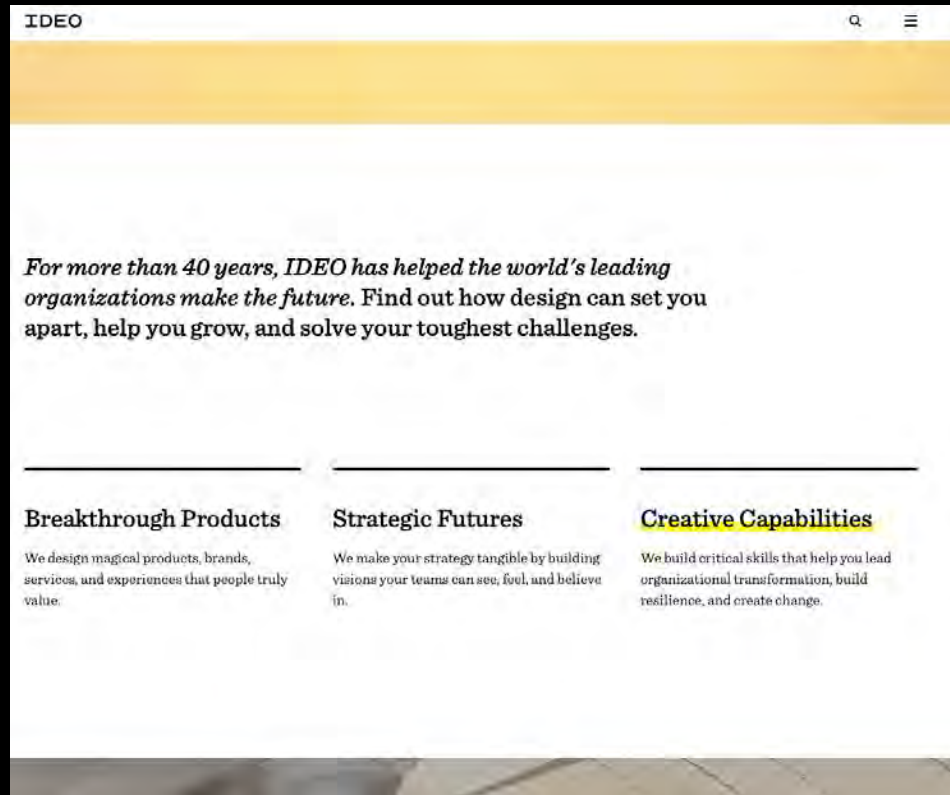
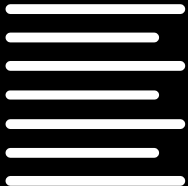


Too short length lines

5. Legibility

People can read
& understand better

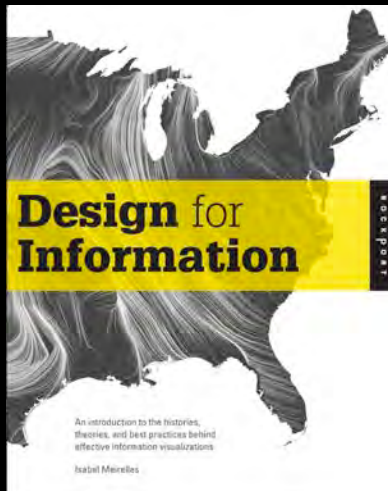
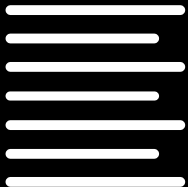
Flush left/rag right



5. Legibility

People can read
& understand better

Flush left/rag right



CHAPTER 1

HIERARCHICAL STRUCTURES: TREES



Stefanie Peascoe and Greg McNamee, U.S.:
"Entangled Word Bank," 2008

The series of diagrams represents changes
in the six editions of Charles Darwin's *On the
Origin of Species*. Chapters are divided into
subchapters, subchapters into paragraph
"leaves," and, finally, small wedge-shaped
"rafters" stand for sentences. Each sentence
is colored in blue if it survives to the next
edition, and in orange if it is deleted.

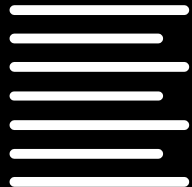
In a nutshell, hierarchical systems are ordered sets where elements
and/or subsets are organized in a given relationship to one another,
both among themselves and within the whole. Relationships vary
according to the field domain and type of system, but, in general,
we can describe them by the properties of elements and the laws
that govern them (e.g., how they are shared and/or related).

In the seminal article "The Architecture of Complexity," Herbert
A. Simon contends that complexity often takes the form of
hierarchy and, as such, hierarchy "is one of the central structural
schemes that the architect of complexity uses." Examples of
hierarchical representations abound in the social and natural
sciences throughout time up to today. According to Chen,
"Visualizing hierarchies is one of the most mature and active
branches in information visualization."²

5. Legibility

People can read
& understand better

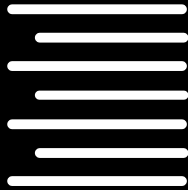
Flush left/rag right



5. Legibility

People can read
& understand better

Flush right/rag left

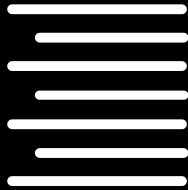


Flush-right text is typical in writing systems that read from right to left, including Arabic and Hebrew. In Latin-based typography, the flush-right setting is rarely employed for long bodies of text. Implemented in smaller blocks, however, flush-right text can be used to create marginal notes, sidebars, pull quotes, or other passages that comment on a text column or image. A flush or ragged edge can suggest attraction (or repulsion) between chunks of information.

5. Legibility

People can read
& understand better

Flush right/rag left

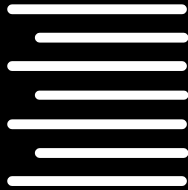


Flush-right text is typical in writing systems that read from right to left, including Arabic and Hebrew. In Latin-based typography, the flush-right setting is rarely employed for long bodies of text. Implemented in smaller blocks, however, flush-right text can be used to create marginal notes, sidebars, pull quotes, or other passages that comment on a text column or image. A flush or ragged edge can suggest attraction (or repulsion) between chunks of information.

5. Legibility

People can read
& understand better

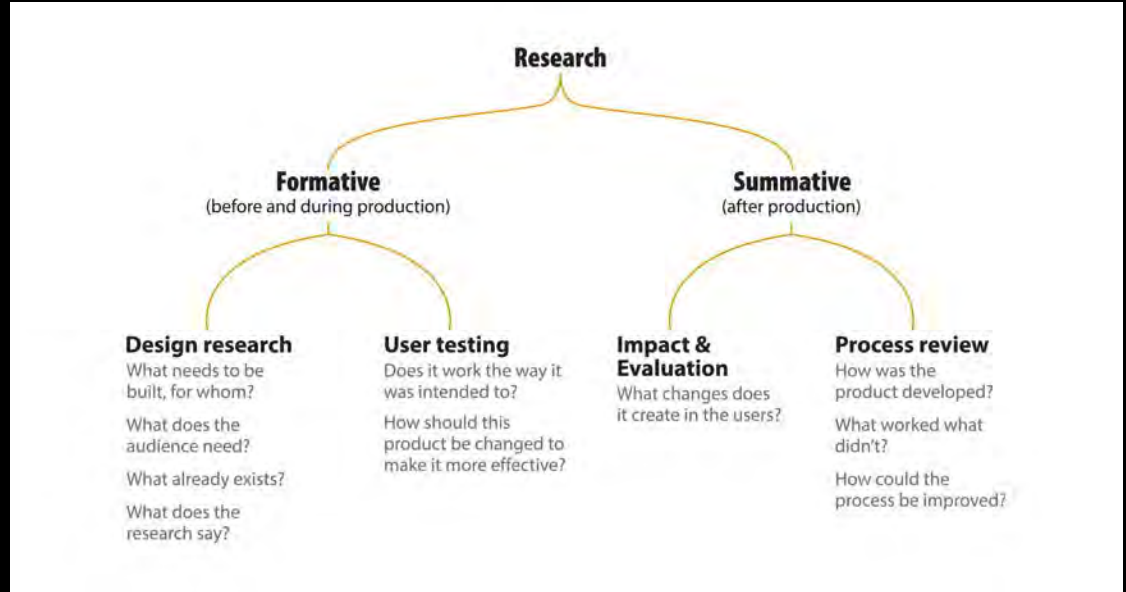
Flush right/rag left



5. Legibility

People can read
& understand better

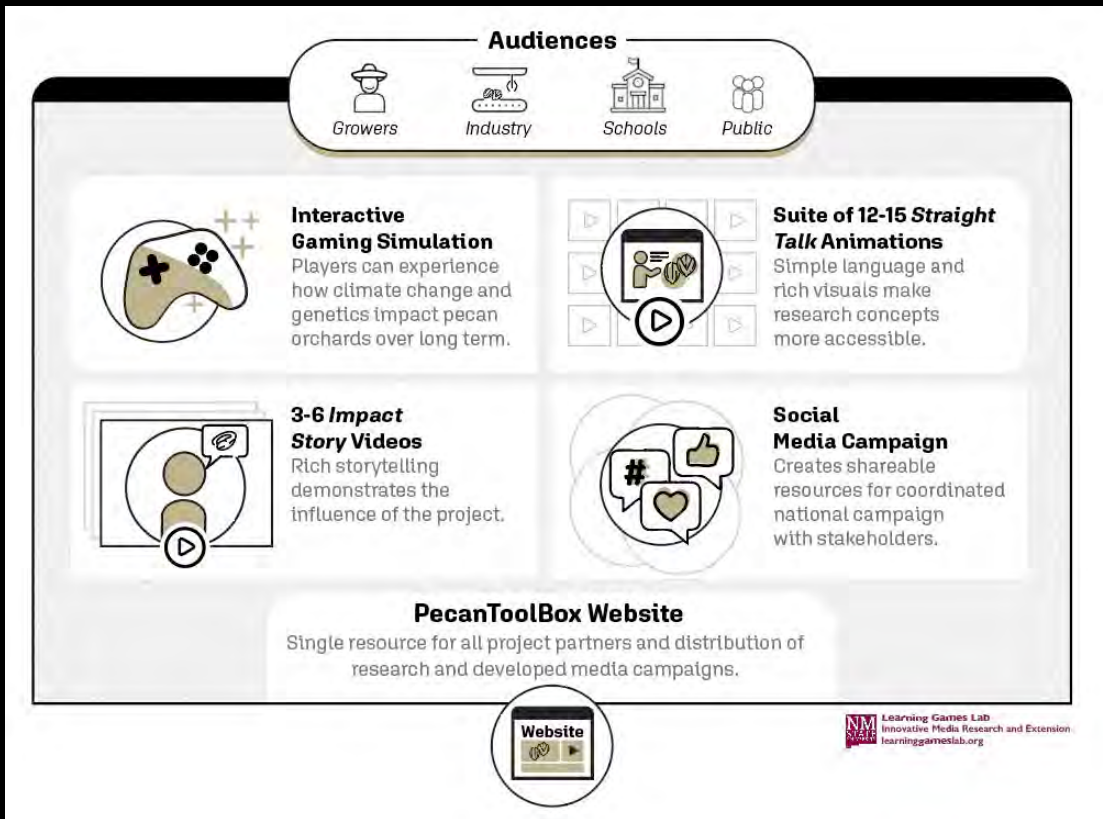
Multiple Alignments



5. Legibility

People can read
& understand better

Multiple Alignments



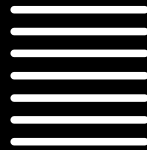
5. Legibility

People can read
& understand better

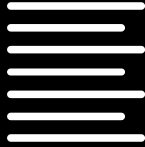
Centered



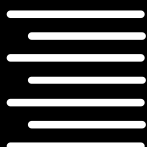
Justified



Flush left



Flush right



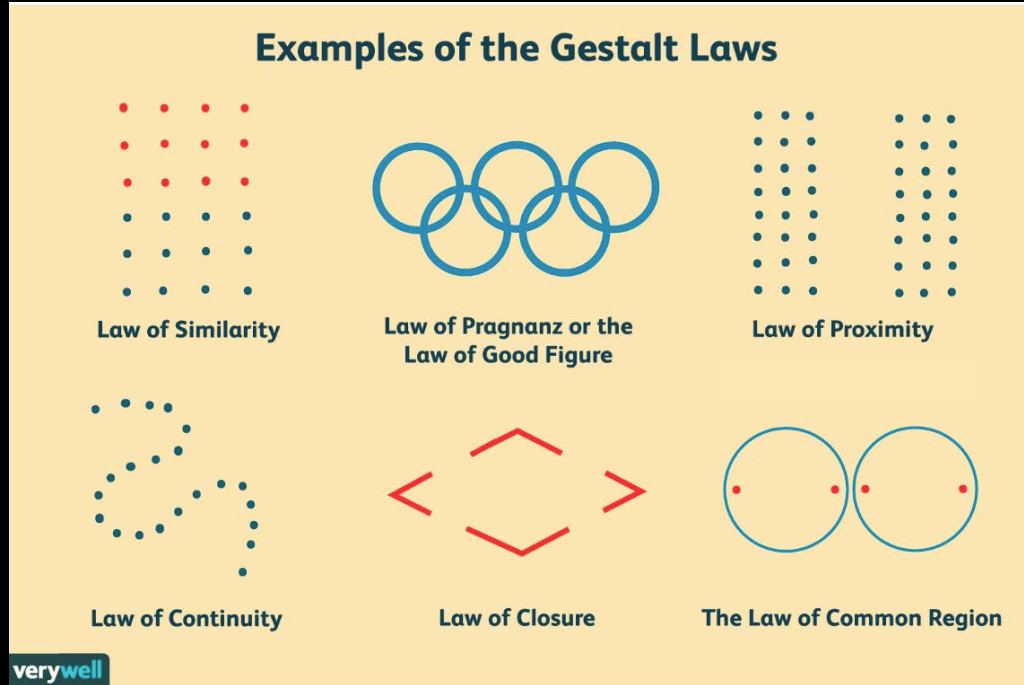
Summary!

- It depends
- Audience, medium, context, goal
- **Use left alignment** for the majority of text on the web.
- **Avoid centered alignment** for long paragraphs.
- **Be careful with right alignment!**
- **Avoid Justified alignment** in digital formats (unless it is static)

6. Appeal

Make it engaging

Harmony
Proportion



https://supersfmrk.life/product_details/5623

6. Appeal

Make it engaging

Proportion
Harmony
Layers



6. Appeal

Make it engaging

Empty spaces

2024 Summer Think Tank Sessions

Become a Games Lab Youth Consultant!



We invite students **entering or completing grades 6 through 8 during the 2024-2025 school year to apply** to be a youth consultant at the Learning Games Lab.

Selected consultants will play and evaluate games and other interactive experiences like VR, and participate in design activities.

Register for Summer 2024

Middle School Sessions

June 3rd-7th | 8:30am to Noon
June 10th-14th | 8:30am to Noon

Sessions are Monday to Friday

Contact

Matheus Cezarotto
Tel: 575-646-5284
email: matheus@nmsu.edu
innovativemedia.nmsu.edu

If you are an individual with a disability who is in need of an auxiliary aid or service to participate, please contact Matheus Cezarotto in advance.

Registration

Access and fill out the form
<https://rb.gy/s3giwz>

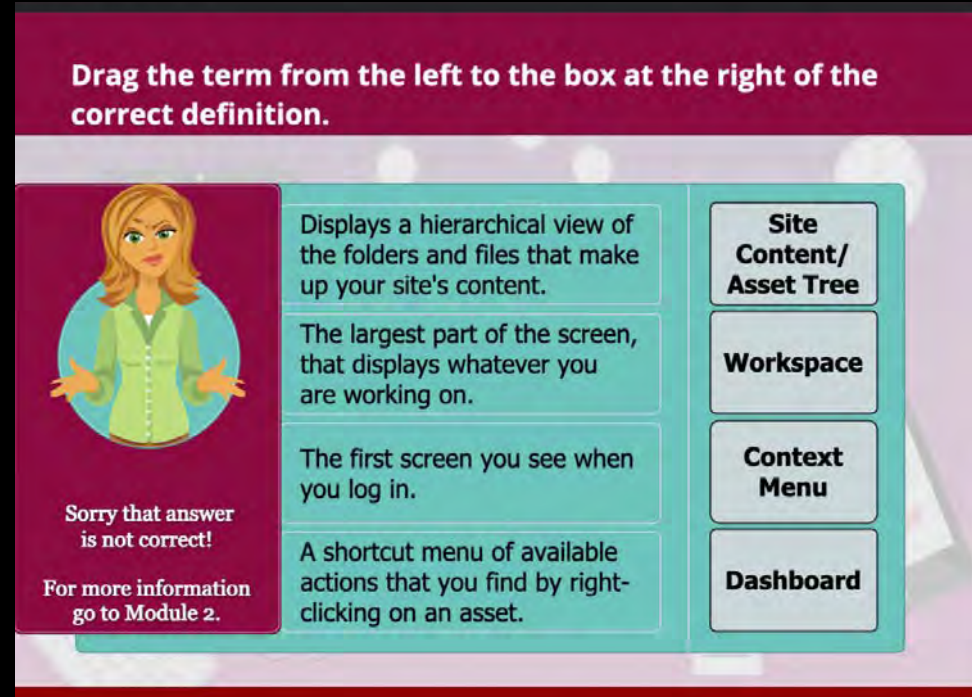


New Mexico State University is an equal opportunity/affirmative action employer and educator. NMSU and the U.S. Department of Agriculture cooperating.

6. Appeal

Make it engaging

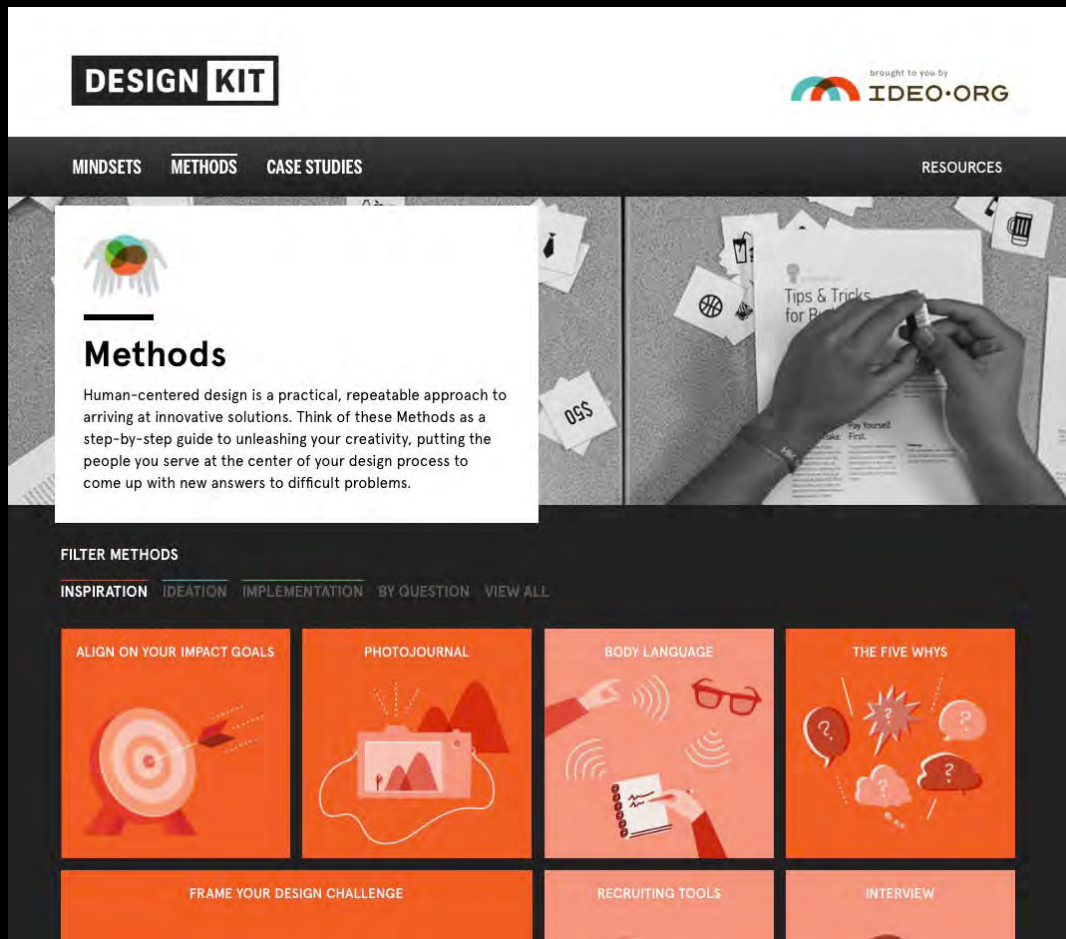
Avoid too much information



6.

Appeal

Make it engaging



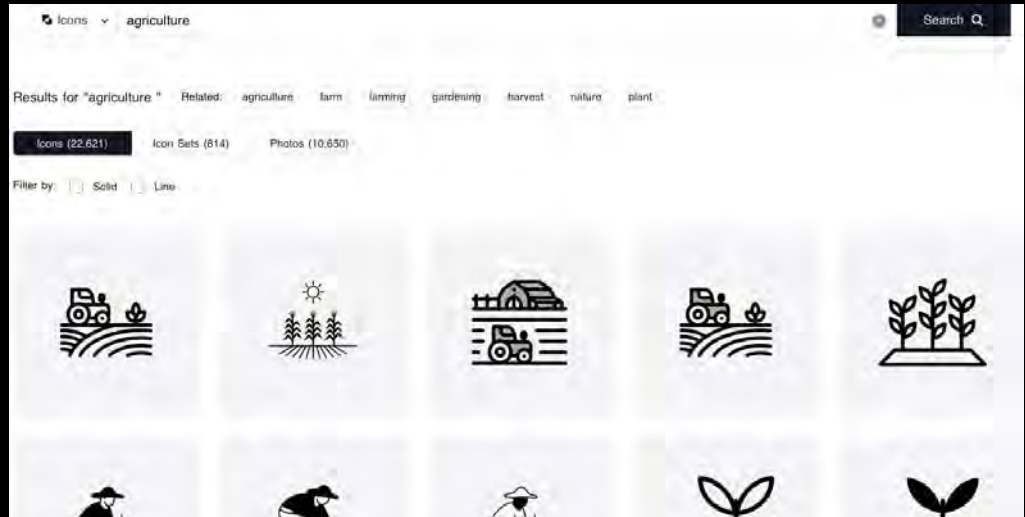
6. Appeal

Make it engaging

Icons!



<https://thenounproject.com/>





Graphic Design

- **Dive and understand** who your audience is
- **Know how** they process information
- **Make it engaging!**



Graphic Design



**Dive and
understand**
who your
audience is



Know how
they process
information



**Make it
engaging!**

6. Appeal

Make it engaging

Textures



With texture



6. Appeal

Make it engaging

Textures

♥ With texture

Plain

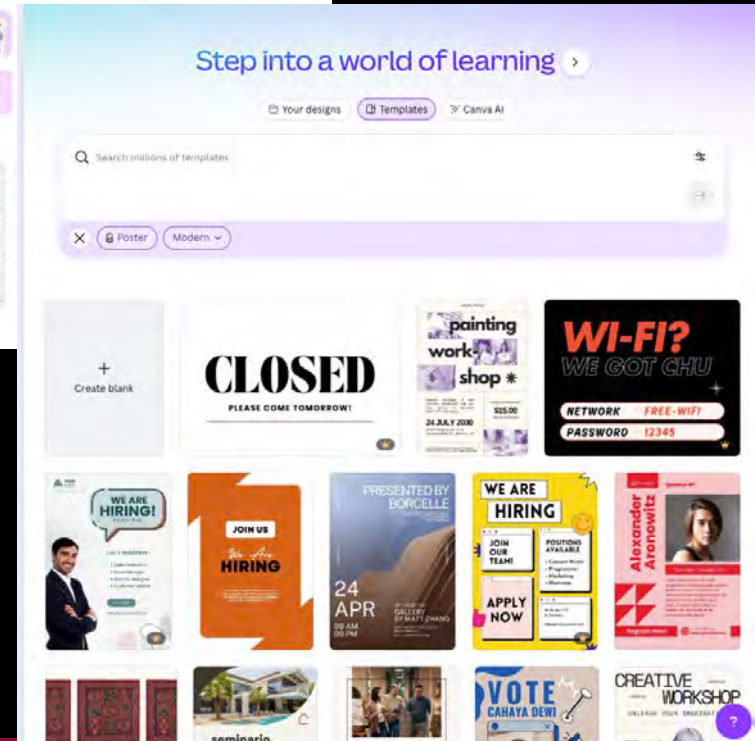
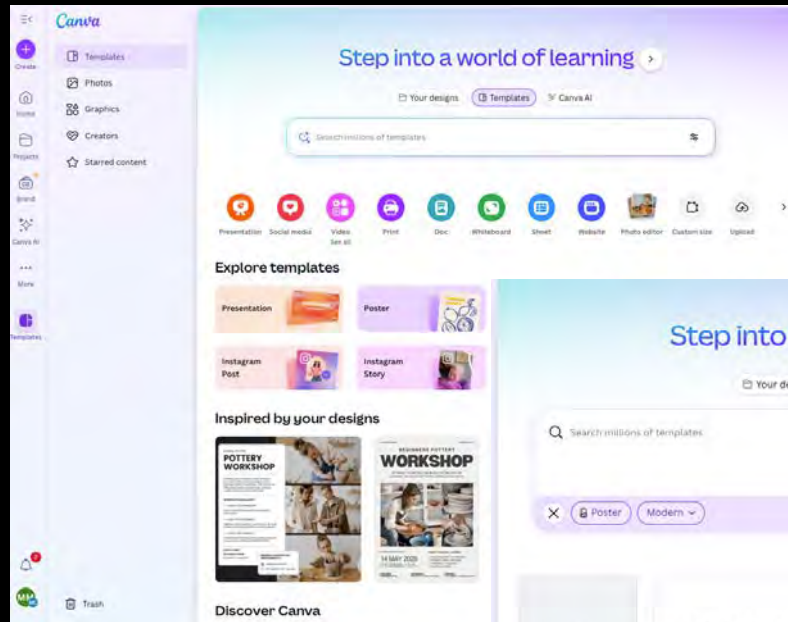
Texture



6. Appeal

Make it engaging

Templates



6. Appeal

Make it engaging

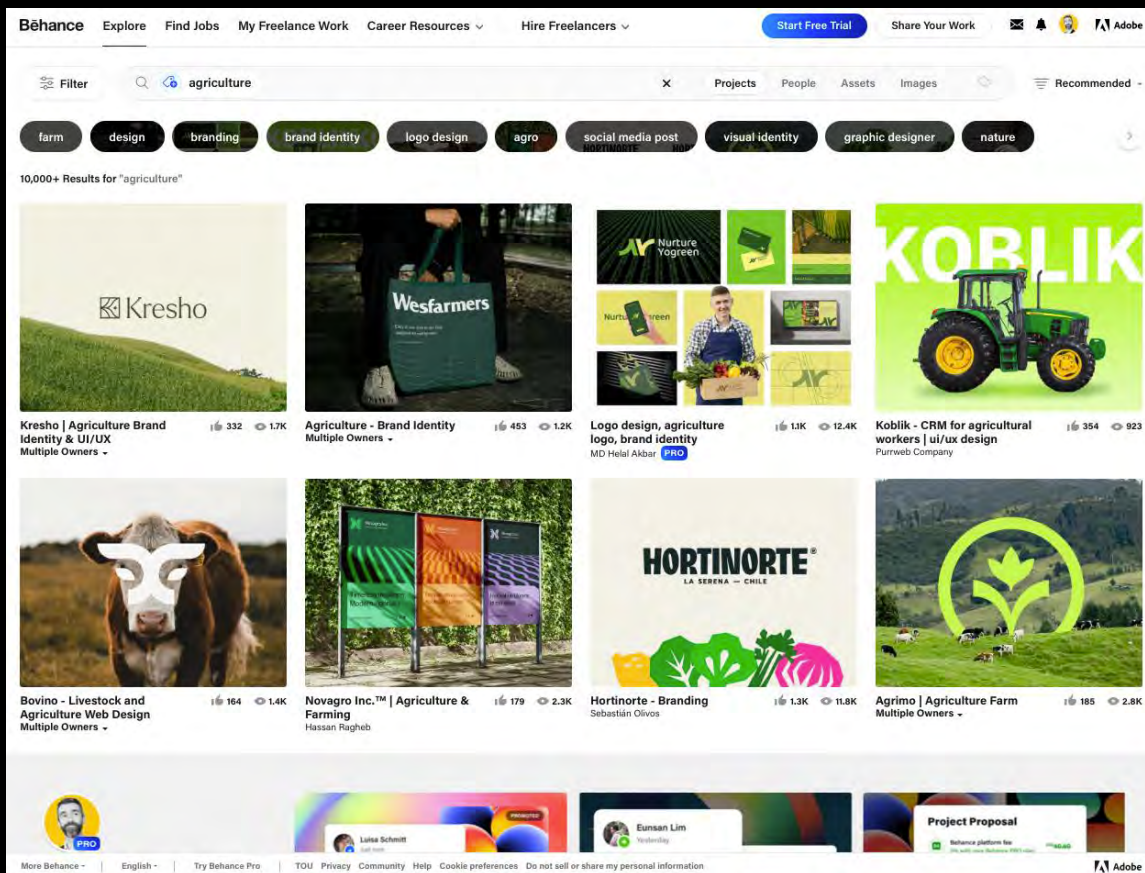
References

References

References

References

behance.net



6. Appeal

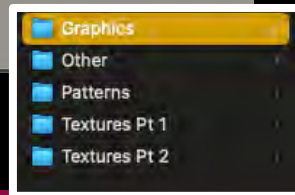
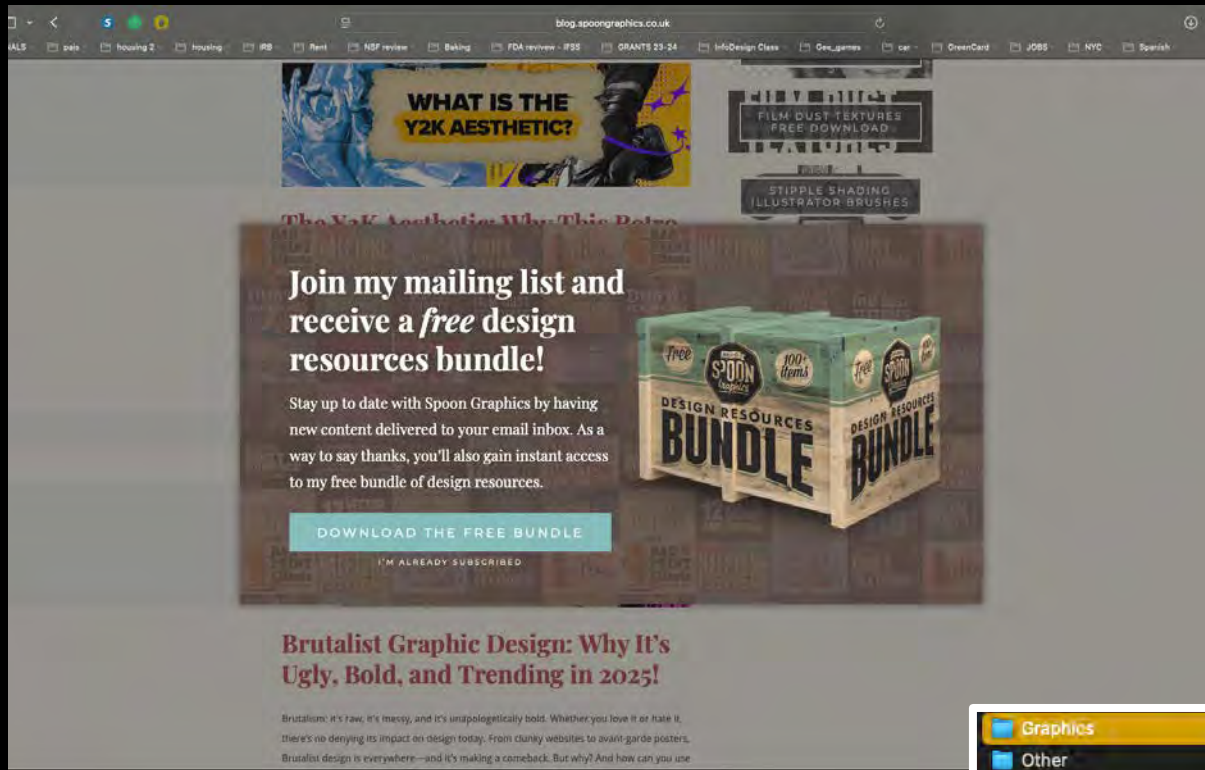
Make it engaging

References

References

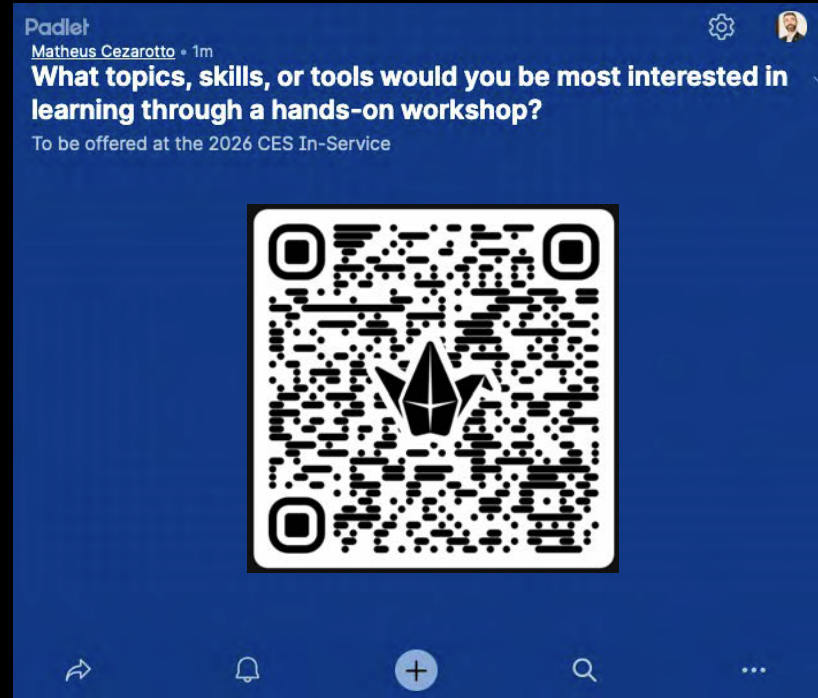
References

References



What do you want learn more?

2026 CES In-Service



<https://padlet.com/matheus28/what-would-you-like-to-have-an-in-person-workshop-on-6r6v6s3zxv8elums>



Extension Speaks Learning Series
**Graphic Design for
Extension: Tips to Elevate
Any Outreach Material**

matheus@nmsu.edu

InnovativeMedia.nmsu.edu

Give us feedback!
Help me to improve this session



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SV_4MFsIlnASJ0DPkG?Q_CHL=qr](https://acesnmsu.az1.qualtrics.com/jfe/form/SV_4MFsIlnASJ0DPkG?Q_CHL=qr)