

- Awareness is on the rise
- Numbers are increasing
- How can we reach neurodivergent students?



Neurodiversity

Session Objectives

- What is neurodiversity?
- Common challenges
- Support strategies



Neurodiversity

- Values **variability** in brain function and cognition
- Differences are **natural and acceptable**
 - including those outside of the “typical” neurocognitive functioning
- **Neurodivergent (ND)**: person whose brain functions differently than the majority of society
- **Neurotypical (NT)**: person whose brain functions similarly to the majority of society



What is
Neurodiversity?

Coined by Judy Singer in late 1990s

ND vs. NT:

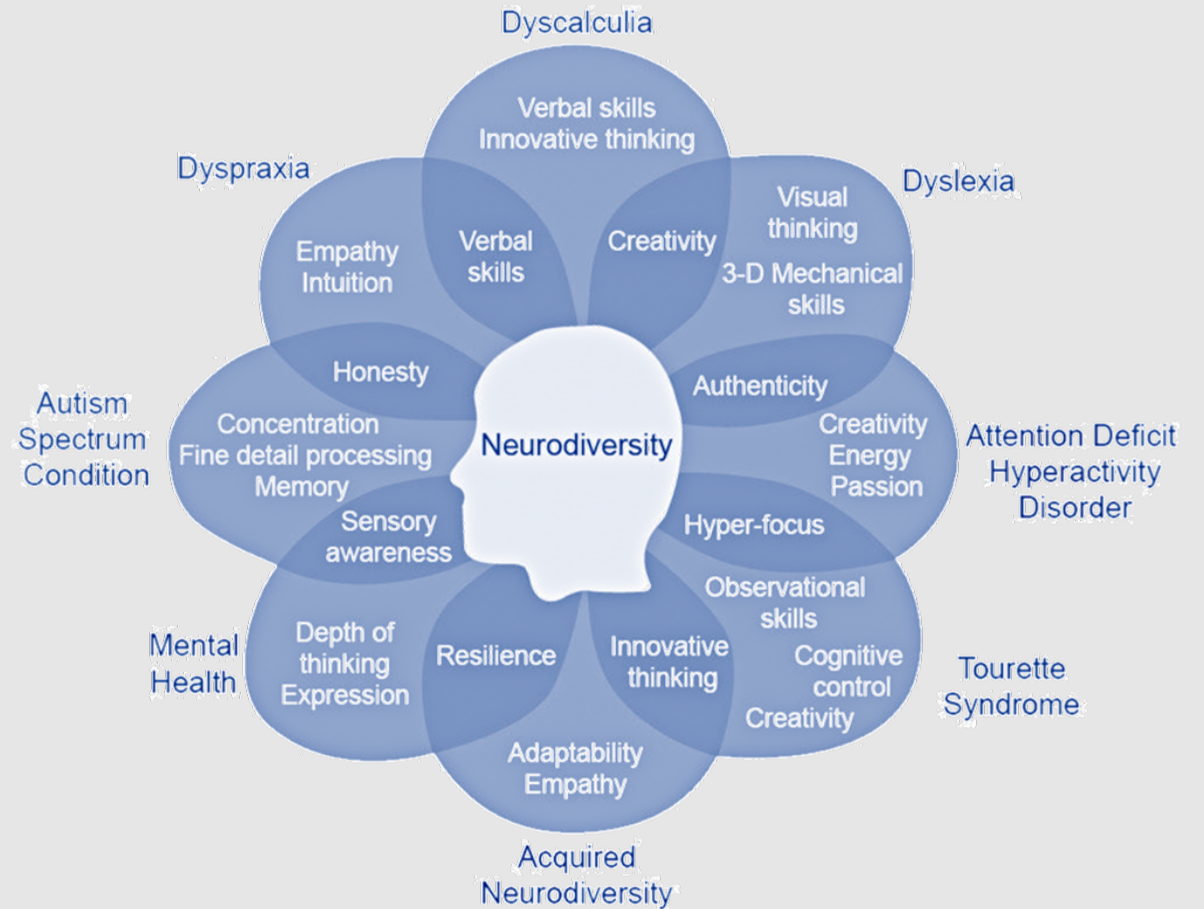
Navigating the World

- **Communicate**
- **Connect**
- **Socialize**
- **Making friends**



Common Neurodiverse Conditions

- **Autism Spectrum Condition (ASC)**
- Dyspraxia (affects movement and coordination skills)
- Dyscalculia
- Dyslexia
- **Attention Deficit Hyperactivity Disorder (ADHD)**
- Tourette's Syndrome
- Acquired Neurodiversity
- Mental Health



The Overlapping Skills and Strengths of Neurodiversity Diagram by Nancy Doyle, based on work by Mary Colley



Question 1: Neurodivergence by the Numbers

What percentage of the world's population is neurodivergent?



Neurodivergence by the Numbers

15-20%

Of the world has a
neurodivergent
diagnosis



12.5%

Of the world has a
mental health
diagnosis

40%

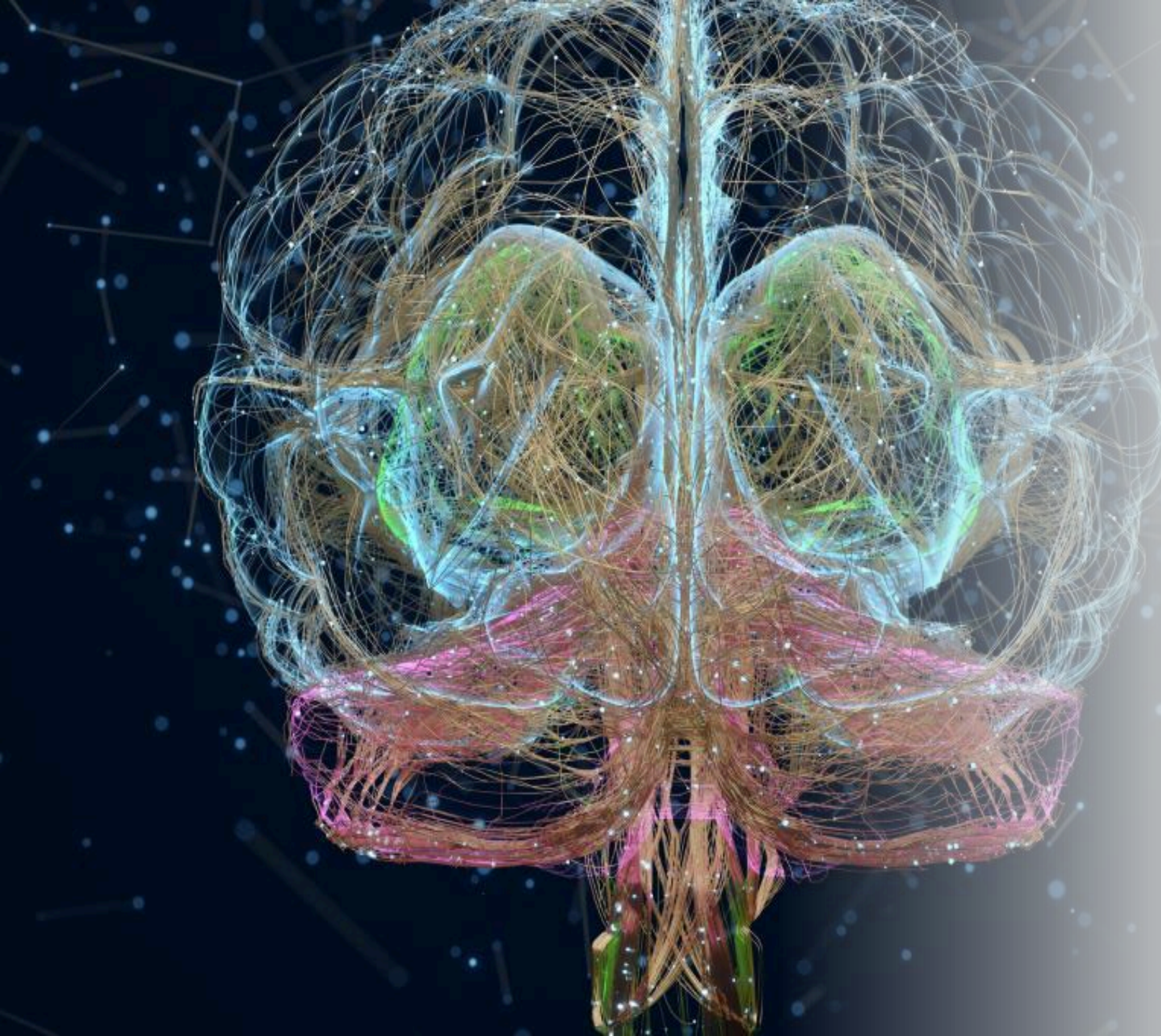
Of people with ASC
also have an [anxiety](#)



Executive Function

Executive Function Definition

“cognitive processes that support goal-directed planning and problem-solving behavior” (Patrick, Blair, & Maggs, 2008, p. 450; Holst & Thorell, 2016).



Executive Function

allows us to...

- **Pay Attention**
- **Plan and organize**
- **Focus**
 - starting and staying focused on tasks
- **Remember details**
- **Self-monitor**

Development of EF

- Development begins around 2 years old
- Fully developed around age 30
- Development delayed by 30–40% for neurodivergent people
- **Many college age students do not have fully developed EF during their time in college**

Neurodivergent Sensory Overload

- Often manifested through:
 - Communication
 - Social Skills
 - Sensory Differences



Communication Skills

- **Receptive communication (receiving)**
 - misunderstanding non-verbal communication (gestures, facial expressions, satire, irony, jokes, tone of voice)
 - Process verbal exchanges more slowly
- **Expressive communication (initiating)**
 - Hard to stay on topic, taking turns speaking, conversational “protocol”
 - Takes longer to organize thoughts and speak

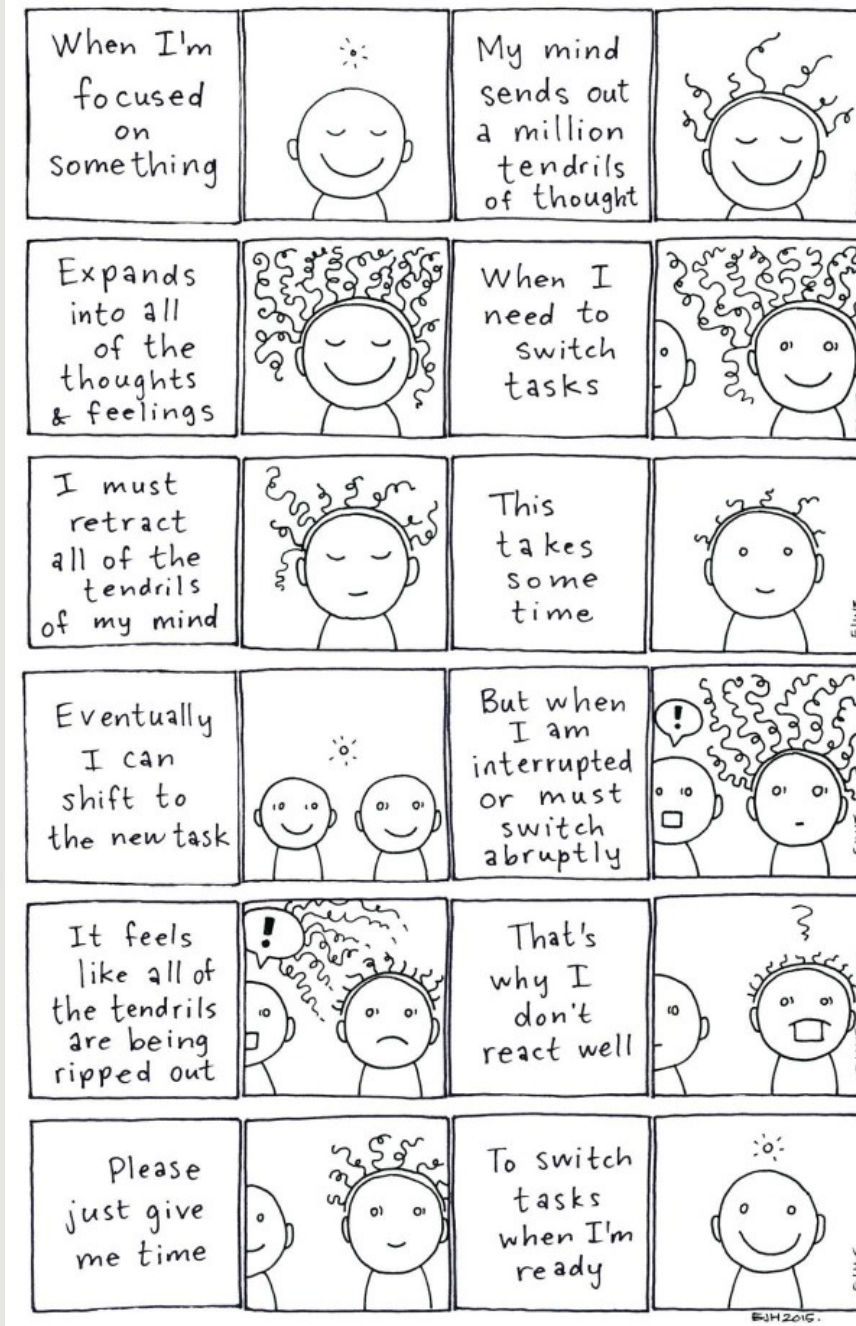
Social Skills

- **Students have difficulty:**
 - understanding other people's perspectives
 - sharing space
 - making eye contact
 - negotiating with others, interacting and working in pairs or groups

Why It's So Hard to Switch Tasks

Tendrils Theory

Illustrator: Erin Human, Human Illustrations
Source: [The Art of Autism](#)



Neurodivergence
is often Hidden



Accessible Design Impact:

Neurodivergent Students

Neurodivergent students need ways to:

- Maintain focus
- Follow content flow
- Understand content
- Reduce cognitive load

Key Digital Accessibility Supports

- Structured formats
- Clear and consistent layouts
- Legible and easy to read text
- Captions and transcripts



Accessible design for neurodivergence often results in providing access for other disabilities too.





Implementing Strategies for Neurodivergent Students

Proactive strategies that can
reduce the need for
accommodations



SLIDE into Accessibility



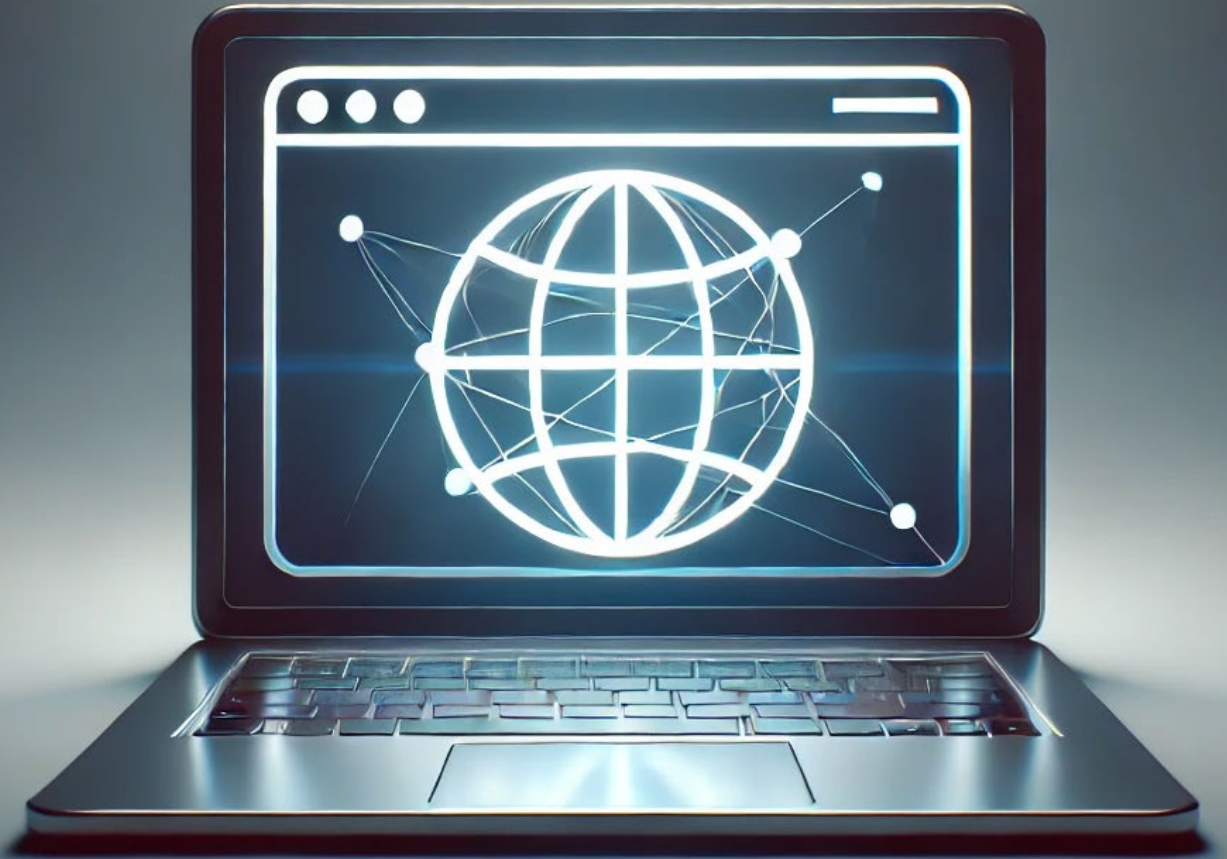
Question 2 : Accessible Design

Which type of digital content do you use most frequently to engage with students?

SLIDE into Accessibility

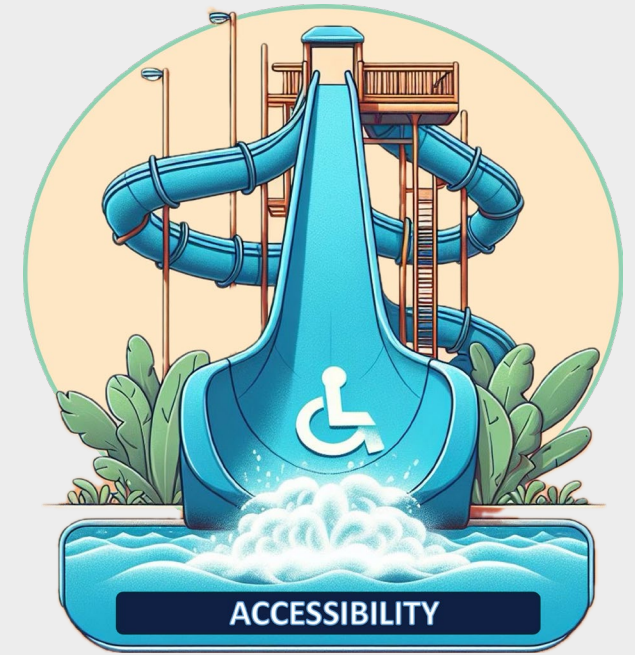
Created by the Center for Applied Special Technology (CAST)

- Documents
- Presentations
- Webpages
- Emails
- Infographics
- PDF
- Social media



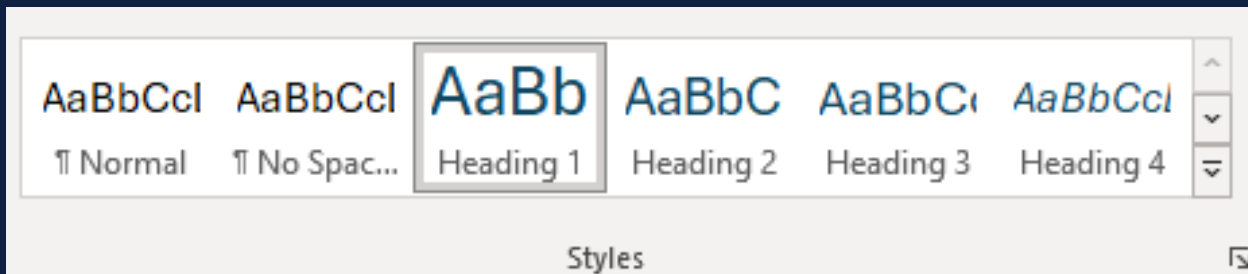
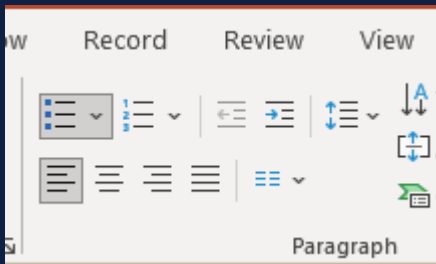
Meaning of SLIDE

- **S**tyles: headings, bulleted lists, slide titles
- **L**inks: meaningful and descriptive
- **I**mages: text descriptions for visuals
- **D**esign: font size/type, color, spacing
- **E**valuate: use accessibility checker to catch common errors



STYLES Tips: Structure is Key

- Use built-in Styles tool
 - Assign headings in correct hierarchical order
 - Format bulleted & numbered lists
- PowerPoint accessible templates
- Position slide content in a logical order

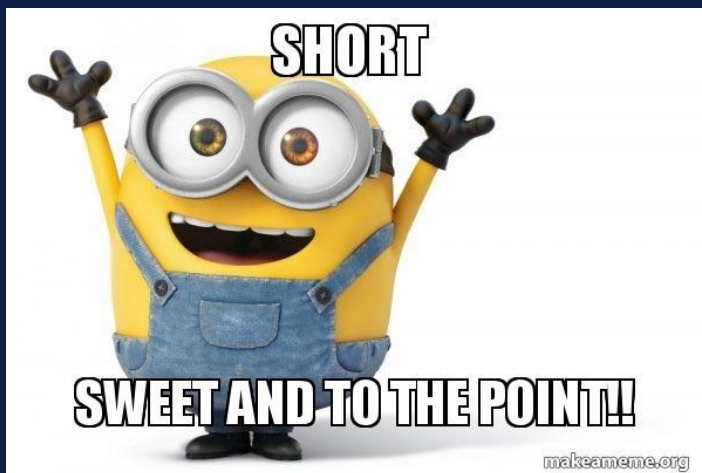


Headings and formatting are essential for people with visual, mobility, and cognitive disabilities



LINKS Tips: Descriptive Text is Key

- Good, concise description
- Meaningful
- Short, easy to read, and memorable
 - Example: [Report an Accessibility Issue](#)



Descriptive links are essential
for people with visual and
cognitive disabilities



DESIGN Font TIPS: Readability is Key

- Simple fonts (sans-serif) and appropriate text size
- Fewer font styles
- No all CAPS
- Justified text is harder to read

San Serif Font:

- Arial
- Verdana
- Tahoma

Serif Font Types:

- **Bookman Old Style**
- Garamond
- Georgia

Script Font:

- *Script MT Bold*



Font type and size are essential for people with visual and cognitive disabilities



DESIGN Color TIPS: Readability is Key

- Good foreground/background contrast
- Beware of placing text over images
- Don't use color alone to convey your message

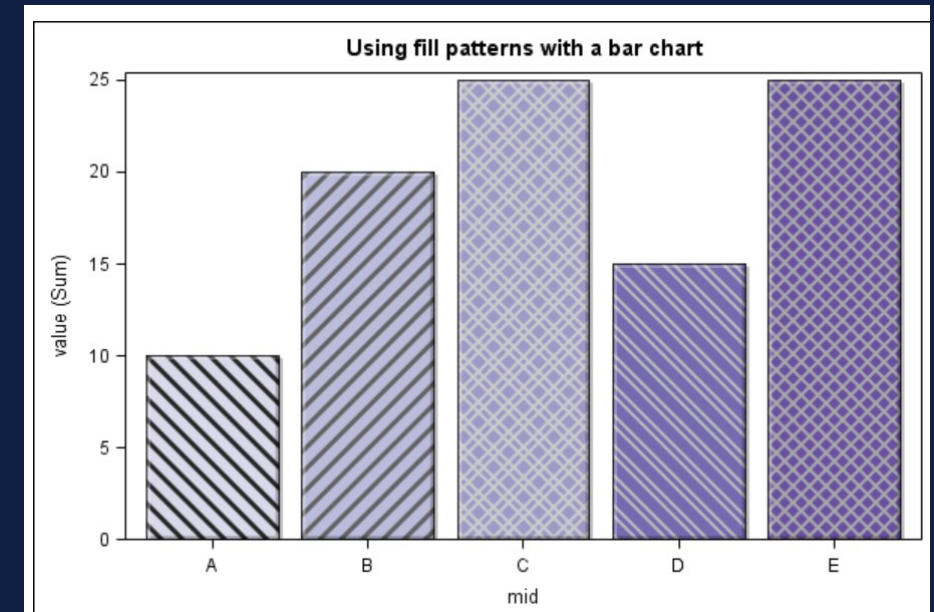
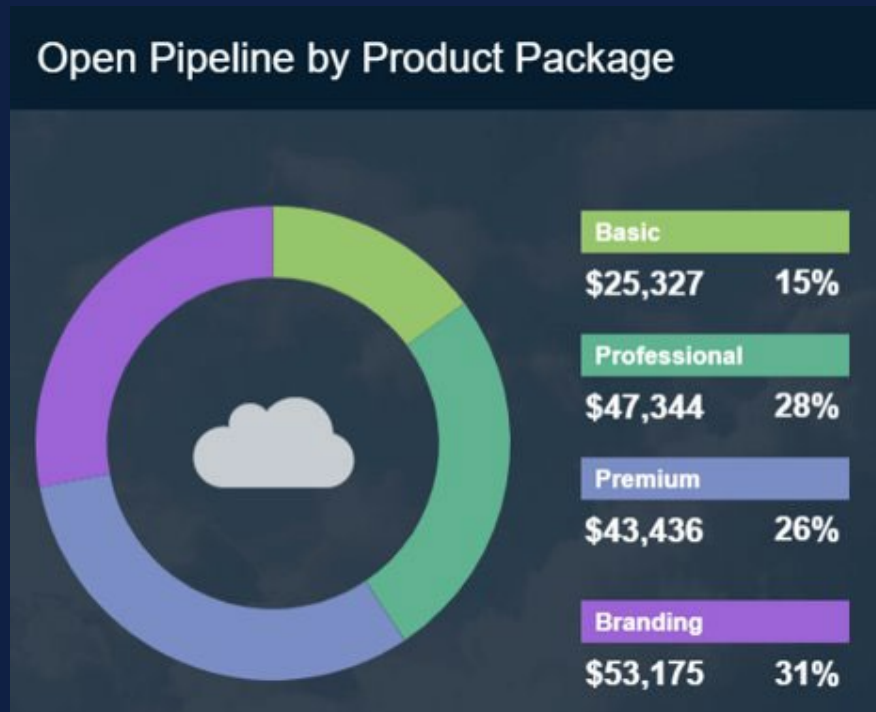
BAD	GOOD
BAD	BAD



Good color contrast is essential for people with visual and cognitive disabilities

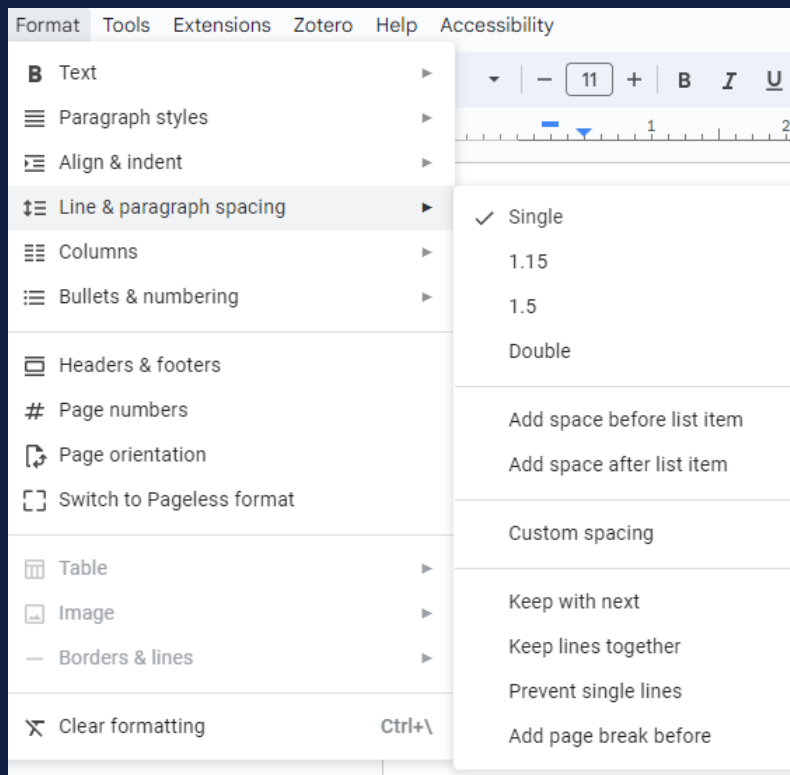


DESIGN Color TIPS Examples



DESIGN Spacing TIPS: Readability is Key

- White space is a good thing!
- Don't use Enter or Tab key to create space
- Use the **Spacing** tool to add space between text



Good spacing is essential for people with visual and cognitive disabilities



Marketing Strategies for Neurodivergent students



UDL & Neurodivergence

- UDL Guidelines

Design Multiple Means of
Engagement →



Design Multiple Means of
Representation →



Design Multiple Means of
Action & Expression →



UDL Communication & Engagement Strategies

Overall Goal: **Reduce Cognitive Load**

- Clear concise communication - scaffold your content
 - Important information should be shared verbally and in writing
- Provide visual, auditory, and text communication
- Consider sensory sensitivities

UDL Guidelines

Design Multiple Means of
Engagement →

The “WHY” of learning



Design Multiple Means of
Representation →

The “WHAT” of learning



Design Multiple Means of
Action & Expression →

The “HOW” of learning



UDL Communication & Engagement Strategies

Overall Goal: **Reduce Cognitive Load**

- Structured and predictable experiences
 - Clear Calls to Action
 - Timelines & Deadlines
 - Step-by-Step approach
- Flexible Engagement Options
 - Offer both synchronous and asynchronous activities and events
 - Variety of ways to interact and communicate
 - Email, chat, social media, etc
 - Written, visual, or verbal
- Easy and accessible ways to report issues and provide feedback

UDL Guidelines

Design Multiple Means of
Engagement →

The “WHY” of learning



Design Multiple Means of
Representation →

The “WHAT” of learning



Design Multiple Means of
Action & Expression →

The “HOW” of learning





Accessible design is essential for some...beneficial to all



UNC GREENSBORO
ITS Learning Technology

Questions?

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