



Learning A-Z

Our Accessibility Journey



Learning A-Z Our Accessibility Journey



John Lucas



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Learning A-Z Our Accessibility Journey

Who we are!

- Our why
 - Inspire Curiosity
 - Ensure Comprehension
 - Instill the joy of learning for (ALL) Elementary Students
- Learning A-Z provides researched-based literacy software and resources for K-5 teachers and their students.
- We currently have over 400 employees
- We serve over 12.5 million students in North America and around the world!

Raz-Plus

Raz-Kids

Reading A-Z

Vocabulary A-Z

Science A-Z

Writing A-Z

Kids A-Z

Headsprout



Learning A-Z Our Accessibility Journey

How I came to the Accessibility team at Learning A-Z

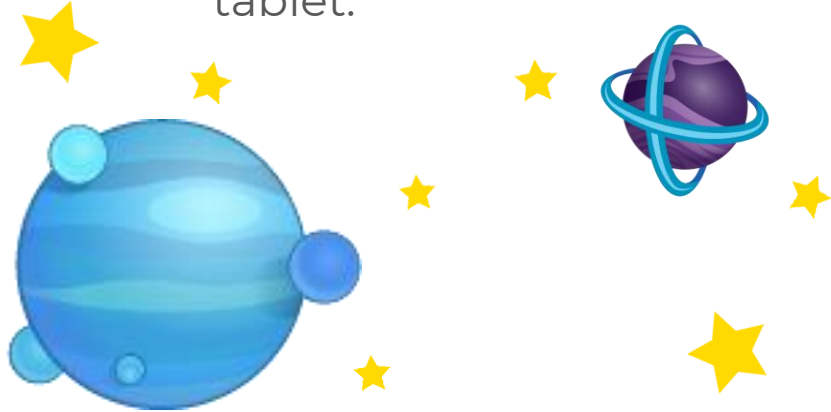
- Hired at Learning A-Z in September of 2019.
- Invited to attend Accessibility team meetings.
- Started leading the Engineering Accessibility team in February 2021.
- Cross departmental Accessibility initiatives.



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Why Accessibility is important to me

- My sister, Cynthia Lucas
 - Developmentally disabled
 - Physical limitations.
 - Uses a computer and tablet.



The Accessibility Challenge



“We choose to go to the Moon in this decade and do the other things, not because they are easy, but because they are hard, **because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too.**”

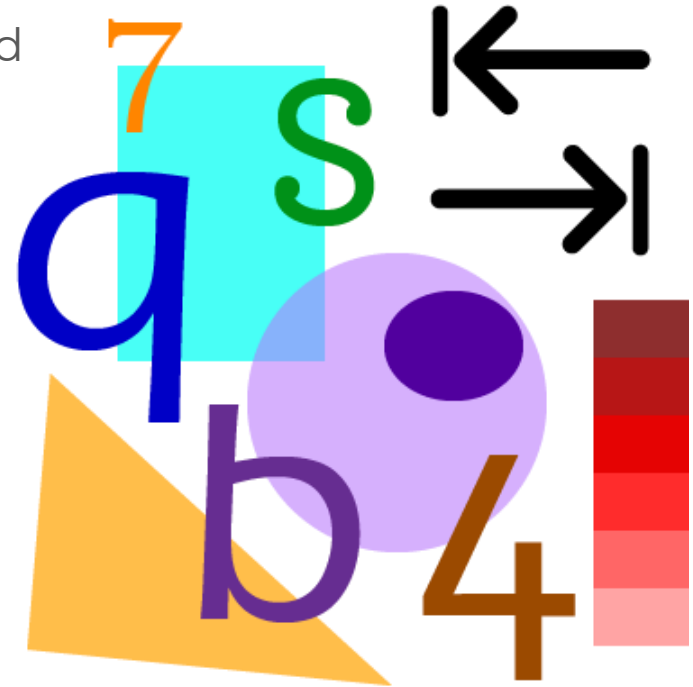
- President John F. Kennedy



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Remediating Accessibility Issues

- 2019 Accessibility audit of product pages and mobile app
- 2 designers with front end coding experience, a software engineer, QA representative
- Top Accessibility issues
 - Color contrast
 - Image descriptions/infographics
 - Font sizes
 - Header order
 - Page navigation/tab order
 - Alt text for screen readers



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It all starts with...



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WCAG 2.1 AA Standards

- Color contrast
 - Minimum of 4.5:1 for small text, 3:1 for large text, including text within an image.
- Fonts
 - Large is defined as 18pt (24 CSS pixels) or 14pt bold (19 CSS pixels).

Color Contrast Analyzer

Foreground Color

Hex: RGB: Choose: Name:

Adjust Lightness : 100%

Background Color

Hex: RGB: Choose: Name:

Adjust Lightness : 50%

Result

Small sample text.
Large sample text.

Contrast Ratio = 8.59 : 1

WCAG Standard	Small Text	Large Text, UI Components, & Graphical Objects
AA	Pass	Pass
AAA	Pass	Pass

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What I've learned

- Accessibility starts with design.
- Check your work!
- Take the time up front to do it right. Remediation is EXPENSIVE!
- Seek help from the experts. Don't try to go it alone.
 - Work with reputable Accessibility consultants
 - Incorporate Accessibility checking tech tools into your process.
 - Seek-out employees with a passion for and experience with Accessibility.



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How I came to the Accessibility team at Learning A-Z

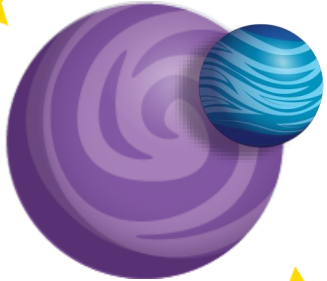
- Software engineers were rotated onto the Accessibility team.
- I expressed interest in working on Accessibility
- Transfer of information between engineers.



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Why Accessibility is important to me.

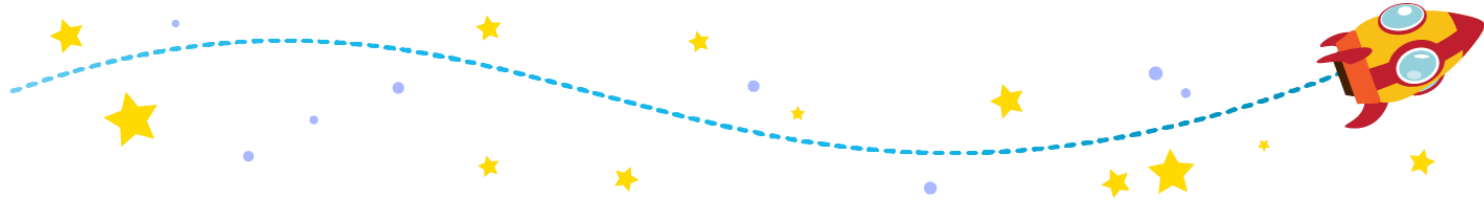
- Sister works in special ed.
- Often hear about her students and different ways they learn
- Big part of decision to work at LAZ



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What we've done in engineering for Accessibility

- Accessibility Tech Talks
- Rotation onto accessibility team
- Development with Accessibility best practices to guide us.
- **Collaboration** between Engineering, UX and Visual Design to improve Accessibility implementation.



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What I've Learned

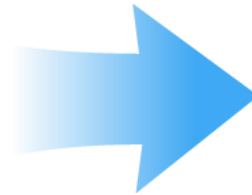
- Prioritize accessibility at first stage of development
 - No task cards that say “add accessibility when time available”!
- Take time to learn accessibility tools (ex. **NVDA**)
- Accessibility issues leak
 - Example: Tabs and tabpanels
 - Appear many places on site, different implementation and behavior
 - Be consistent with behavior and testing.



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How I came to the Accessibility team at Learning A-Z

- Joined Kurzweil as an intern, which provided a solid foundation in accessibility testing.
- Transferred over to Learning A-Z.
- Always asking how accessibility would be a part of the software development.



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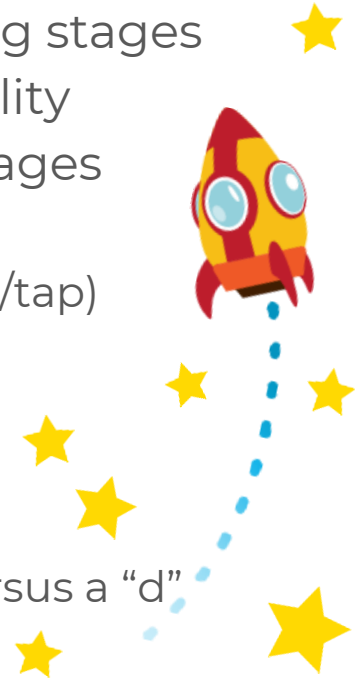
Why Accessibility is important to me.

- Firsthand experience as a struggling student; struggling students lack confidence regardless of their actual abilities
- Seeing students use assistive tools with software that recognizes those tools gives students independence; inaccessible software erodes confidence and independence
- QA is an advocate for user, including the students; accessible software is available to everyone
- Gratitude of success; ties directly to company value of instilling the joy of learning



What does QA do for Accessibility

- Accessibility needs to be addressed in the initial planning stages
- Reviewing requirements and design, ensuring accessibility requirements explicitly defined in the initial planning stages
- Test as the student at the forefront:
 - Hotspots are consistent and are bigger (for imprecise click/tap)
 - Keyboard accessibility and correct tab order
 - Reading order is consistent
 - Color contrast appropriate and easier to navigate
 - Time events appropriately for a new reader
 - Font size check, ensuring students are able to see a “b” versus a “d”
 - Audio recordings



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What I've Learned

- Software evolves, change is inevitable.
- Interact with the software through the eyes of a child. (empathize with our users)
- After the initial investment for accessibility, ongoing maintenance is required, but it is less expensive when it is part of the process
- Requires **patience, perseverance and vigilance.**



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Where are we now

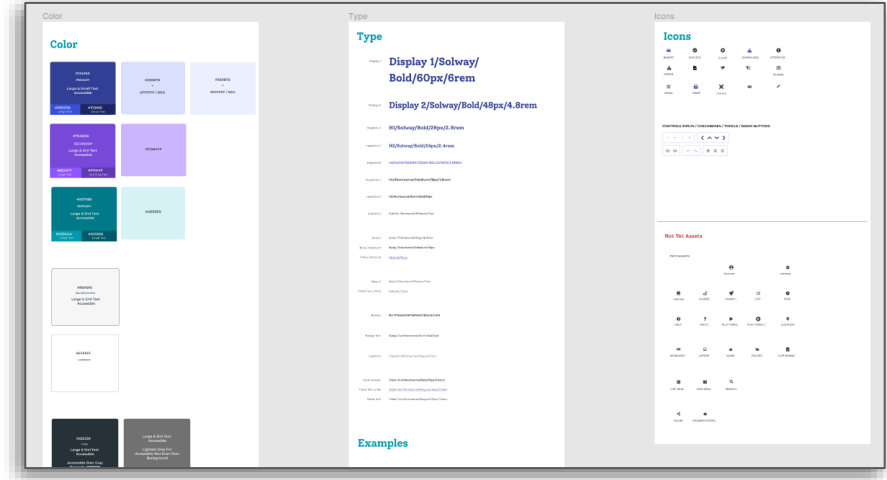
- A company-wide Statement of Accessibility
- Training for our employees
- Established a Learning A-Z Accessibility project team.
- Collaborating across departments on Accessibility.
- Established a customer service email specifically for Accessibility issues.
- Created a new, accessible design system.
- Improving our PDF creation to make them more accessible to our users.
- Applying best Accessibility practices for our videos.
- Triage Accessibility issues that come through QA and Customer Service for remediation.



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A new design system

- Created a design system for our web products to meet WCAG 2.1 AA Accessibility standards for our current development and future products.
 - Documentation for rules and governance
 - Color palette
 - Fonts
 - Material component design



PDF Enhancements

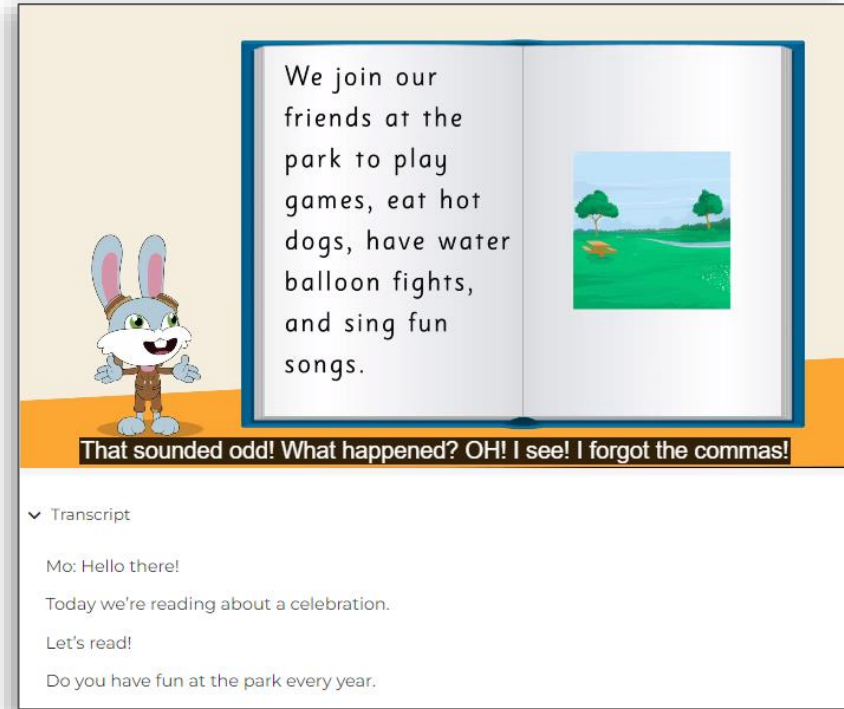
- Meaningful content must be marked with the appropriate semantic tags.
- Text hierarchy tagging
 - Ensures Screen Reader will read only the text we intend it to.
- The structure tree created by the document tags must reflect the document's logical reading order.
 - Tag tree reflects logical reading order



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Video guidelines

- Applying best Accessibility practices for our current and future video content.
 - Fonts
 - Colors
 - Images
 - Closed Captioning
 - Audio transcripts of video content
 - Animation/motion graphics



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Summary

- There is no “magic pill”
- Planning ahead and starting with Accessibility up front saves time and money.
- Accessibility takes a team commitment from your entire organization.
- Don't try to “go it alone”
- Accessibility is ongoing
- Have empathy with your customers/users.
- Accessibility is good for business!



Q&A



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