

Thunderbird Study: Search Bar

Scope of Study

This accessibility study was conducted between September 2025 - January 2026.

The purpose of this study is to observe both pros and flaws in Thunderbird's accessibility features for its users, including but not limited to the following when using the Global Search Bar:

- **Navigational Focus**
- **Keyboard Navigation**
- **Screen Reader**
- **Voice Control**
 - ****Voice control analysis is currently *on hold***

Additionally, I included observations I had when opening and responding to emails after using the global search bar as this was my next expected behavior of a user.

A comparison to other a11y-focused platforms (such as Gmail and Outlook) was completed to observe established patterns of accessibility users have come to expect.

It is important to note that users are as diverse as the systems they use to navigate computers; many use a combination of these accessibility features to use Thunderbird, so an inability to operate something **without** the use of a mouse is a critical flaw.

Flaws / Areas of Improvement

Navigational Focus

Summary:

During testing on macOS with keyboard navigation enabled, I observed difficulty selecting individual emails, and there was no visible highlight to indicate the current focus point, making it unclear where the focus was located. Additionally, after using the Global Search bar, the interface immediately placed me into Quick Search, which was disorienting and slightly disruptive to workflow. While these behaviors were specific to this test instance and may not be consistent across all users or systems, they highlight potential accessibility challenges for keyboard-only navigation.

Navigation Focus Conflict (*macOS*)

Focus & Keyboard Navigation Conflict

- Enabling macOS “keyboard navigation” periodically conflicts with result selection, preventing individual email selection
- Behavior appears consistent with a known macOS focus-handling issue observed across applications
 - **User Impact:** Keyboard-only users cannot efficiently interact with search results, reducing accessibility and workflow efficiency. Behavior suggests systemic focus management challenges rather than application-specific failure.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **HIGH**

Interactive elements do not consistently display a highlighted focus state, making active selection unclear

- Focus visibility issues reduce navigational orientation and user confidence in keyboard workflows
 - **User Impact:** Users navigating via keyboard may struggle to identify the active element, increasing cognitive load and reducing usability.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **HIGH**

After global search interaction, focus shifts immediately to quick search

- Unexpected focus movement introduces additional navigation steps and interrupts workflow
 - **User Impact:** Flow disruption increases task completion time and reduces interaction efficiency.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **HIGH**

Keyboard Control

Summary:

During keyboard-only testing of Thunderbird's Global Search and email workflows, I observed several accessibility challenges. Excessive tabbing was required to navigate to emails, and the Enter key did not always open messages. After replying, the text editor was sometimes inaccessible, and new windows opened unexpectedly, increasing cognitive load. Arrow keys only scrolled the page rather than selecting emails, and switching between mouse and keyboard often disrupted focus. These findings highlight opportunities to improve keyboard navigation, focus management, and workflow consistency across testing environments.

Keyboard Interaction & Navigation (*macOS*)

Excessive tabbing required to navigate to emails after using search and opening an email

- Navigation flow requires multiple tab stops before reaching interactive results (see navigational flow Image 1a in full study)
 - **User Impact:** Increased interaction cost and task completion time for keyboard users reduces efficiency and usability of search navigation.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **HIGH**

Global search results do not open emails with the Space/Enter key (click interaction required)

- Keyboard activation via Enter is nonfunctional for result selection
 - **User Impact:** Keyboard-only workflows are disrupted, requiring mouse interaction and reducing accessibility.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **HIGH**

After replying to a message, focus does not return to the text editor or controls

- Unable to access text editor, send button, or exit message using keyboard navigation (see Image 2c in full study)
 - **User Impact:** Keyboard users cannot complete messaging workflows, representing a significant usability and accessibility barrier.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **HIGH**

Keyboard Interaction & Navigation (*macOS*)

New window creation after search requires mouse-based closure

- Keyboard navigation cannot close search windows or return to prior context (see Image 2e in full study)
 - **User Impact:** Flow disruption and additional interaction steps increase cognitive load and reduce usability for keyboard users.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** HIGH

Unnecessary tabbing and arrow key behavior prevents efficient result selection after search

- Arrow keys scroll the page instead of selecting results; result selection requires tab navigation
 - **User Impact:** Keyboard users cannot quickly navigate result lists or recover if an item is skipped, reducing workflow efficiency and usability. Gmail and Outlook use arrow navigation for result selection, creating inconsistent interaction models.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** HIGH

New search actions create additional windows that require mouse-based closure

- Keyboard navigation cannot close search windows or return to prior context (see Image 2e)
 - **User Impact:** Flow disruption and reliance on mouse interaction increases cognitive load and reduces accessibility for keyboard-only users.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** HIGH

Keyboard Interaction & Navigation (*macOS*)

Single-key navigation is difficult to discover or activate, limiting keyboard workflow efficiency

- Single-key navigation could not be reliably enabled despite guidance; emails cannot be opened with “O” or “Enter”
 - **User Impact:** Keyboard-only workflows are constrained, reducing accessibility and user productivity. This limits support for users relying on simplified navigation models.
 - **Priority:** **HIGH**

Tab navigation flow does not efficiently reach search results, leaving focus within the search context and requiring additional tab steps (see Images 9a–9b in full study)

- **Focus remains within the search interface and does not immediately surface result items, requiring extra tab interactions to reach selectable results**
 - **User Impact:** Keyboard users must perform extra navigation to reach results, reducing efficiency and usability of search workflows. This increases interaction cost compared to models where results are immediately accessible.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **HIGH**

Keyboard Interaction & Navigation (*macOS*)

Global Search (replying to email): Pop-ups block keyboard access to preferences, requiring mouse interaction (see Image 2a in full study)

- Pop-up blocking prevents keyboard navigation into preferences or settings, forcing interaction via mouse
 - **User Impact:** Keyboard users cannot access settings or preferences via navigation workflows, reducing accessibility and workflow efficiency. Mouse dependency breaks keyboard-first interaction models.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** MID

Keyboard focus becomes unstable when switching between mouse and keyboard navigation

- Navigation state is lost after input method changes, requiring application restart or mouse reactivation to continue interaction
 - **User Impact:** Navigation context is lost, requiring application restart or mouse reactivation to continue interaction. This disrupts workflows and reduces usability for keyboard users.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** MID

Global search tabbing skips filter controls, limiting interaction to mouse-only workflows (see Image 2c in full study)

- Tab order bypasses filter elements, preventing keyboard access to refinement controls
 - **User Impact:** Keyboard users cannot access filters or refine results, reducing search efficiency and accessibility. Workarounds increase interaction cost and decrease usability.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** MID

Screen Reader

Summary:

Screen reader testing using macOS VoiceOver revealed several usability barriers. Announced output was frequently verbose or redundant, and key fields such as "To" and "From" were not consistently identified. Email body content was largely unread, with VoiceOver announcing only interactive elements such as links. On macOS, instructions for interacting with content frames were unclear, and activating those frames did not produce meaningful output. These findings indicate that Thunderbird's screen reader experience requires refinement to deliver clear, relevant, and navigable feedback for VoiceOver users.

Screen Reader Testing (*macOS Voiceover*)

VoiceOver provides verbose and context-heavy output after search operations (see Images 3a–3d in full study)

- VO announces metadata and structural information (e.g., “window savory, insertion on word: savory...”) in addition to user-facing content
 - **User Impact:** Excessive or technical speech output can be jarring and reduce comprehension, increasing cognitive load for screen reader users. This may obscure primary task information and reduce usability.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | VoiceOver
 - **Priority:** **HIGH**

Message metadata (“to” and “from”) is not explicitly announced during navigation (see Images 4a/4b and 3b–3d in full study)

- VO does not clearly label message direction when tabbing or clicking fields
 - **User Impact:** Users may be uncertain whether they are viewing sent or received messages, reducing orientation and message context understanding. This limits accessibility for screen reader workflows.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | VoiceOver
 - **Priority:** **HIGH**

VoiceOver does not announce the “preferences” element even when selected (see Image 6c in full study)

- UI element lacks audible announcement despite interaction
 - **User Impact:** Screen reader users cannot confirm element focus or access preferences via auditory feedback, reducing accessibility and navigation confidence.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | VoiceOver
 - **Priority:** **HIGH**

Screen Reader Testing (*macOS Voiceover*)

VoiceOver does not read message body content when navigating email content (only reads links during tab navigation) (see Images 5a–5e)

- VO announces structural elements but omits message body content outside interactive links
 - **User Impact:** Screen reader users cannot access email content in non-link regions, limiting message comprehension and usability. While promotional/ad emails often use sandboxed content (a common pattern), handwritten emails should surface readable message text. This suggests inconsistent content accessibility.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | VoiceOver
 - **Priority:** **HIGH**

VoiceOver interaction with content frames does not surface readable message content (announces “scroll area” only) (see Images 5a–5d)

- Content frame is identified as a scroll area but message body text is not announced
 - **User Impact:** Screen reader users cannot access message content within the frame, limiting information accessibility and usability. This represents a content exposure issue rather than cosmetic feedback.
 - **Environment:** macOS Tahoe 26.0 | Thunderbird 143.0.1 | VoiceOver
 - **Priority:** **HIGH** (*access to core content is required for accessibility*)

Additional Findings

Summary:

During testing of Thunderbird's settings and appearance workflows, I observed usability challenges with light/dark mode and font adjustments. Locating and toggling themes was confusing, requiring multiple navigation attempts to locate and find the correct settings. Font size changes were not immediately apparent when viewing emails, and highlighted states lacked sufficient contrast for users with color vision deficiency. Enhancing discoverability of keyboard shortcuts and offering a centralized panel for them could improve accessibility for all users. Additional improvements, such as skip-to-content functionality and more visible focus indicators, would further support keyboard and assistive technology navigation.

Additional Areas of Improvement (*macOS*)

Difficulty locating light/dark mode toggle; settings path was unclear and required external search

- Light/dark controls were not discoverable within Appearance or General settings, and search terms (“dark,” “light”) surfaced unrelated or misleading results (themes/Spotlight)
 - **User Impact:** Users may struggle to configure display preferences without external guidance, reducing usability and discoverability of core personalization features. Clearer settings organization or explicit light/dark controls could improve workflow efficiency.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** MID

Font size adjustment succeeded in settings but visual change was not perceptible within message views (see Images 2f–2g in full study)

- Font size setting updates did not reflect noticeable differences in rendered message content during normal navigation, only becoming apparent via search context
 - **User Impact:** Users may believe changes are ineffective, reducing confidence in settings functionality and accessibility customization. If rendering differences are expected only in specific contexts, clearer feedback would improve usability.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** MID

Additional Areas of Improvement (*macOS*)

Centralized keyboard shortcuts panel is not easily discoverable or accessible; shortcuts unavailable within application settings

- Keyboard controls could not be accessed via macOS settings or Thunderbird interface despite full keyboard accessibility settings being enabled
 - **User Impact:** Users must rely on external documentation to discover shortcuts, reducing discoverability and usability. A centralized shortcuts panel within settings would improve accessibility and workflow efficiency for non-power users.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **LOW**

Highlighted/focus states may lack sufficient visual contrast; accessibility for color-dependent users could be improved

- Focus indicators rely on default color treatments (blue in light mode, orange in dark mode), which may be difficult to perceive for color-blind users
 - **User Impact:** Users with color vision differences may struggle to identify active elements, reducing navigational clarity and accessibility. Offering customizable or higher-contrast focus indicators could improve usability.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **LOW**

Skip to main content option is unavailable; navigation requires traversing interface controls (see Image 12a in full study)

- Thunderbird does not provide a “skip to main content” shortcut or link comparable to patterns used in applications like Outlook
 - **User Impact:** Keyboard and screen reader users must navigate through interface controls before reaching primary content, increasing interaction cost and reducing navigational efficiency. A skip-to-content option would improve accessibility and workflow speed for non-mouse users.
 - **Environment:** macOS Tahoe 26.2 | Thunderbird 146.0.1 | MacBook Air built-in keyboard
 - **Priority:** **LOW**

Study Notes & Observations

Navigational Focus

1a Navigational flow from initial start up using keyboard navigation

***consistent recurrences of this throughout keyboard navigation*

The screenshot shows the Thunderbird email client interface with several numbered callouts (1-16) indicating key navigation elements:

- 1**: Mail icon in the top-left corner.
- 2**: Search bar in the top header.
- 3**: Search icon in the top header.
- 4**: Menu icon (three horizontal lines) in the top-right corner.
- 5**: Account name 'Inbox - mcafeekaci@gmail.com' in the top header.
- 6**: Mail icon in the left sidebar.
- 7**: 'New Mess...' notification in the left sidebar.
- 8**: 'Inbox' folder selected in the left sidebar.
- 9**: 'Inbox' folder with '2427' messages in the left sidebar.
- 10**: 'Quick Filter' button in the top-right of the message list.
- 11**: 'Thunderbird is a gift from thousands of people like you...' promotional text in the right pane.
- 12**: First email in the list: 'LinkedIn <messages-noreply@linkedin.com> Accelerate your knowledge: Follow pages you recently explored'.
- 13**: 'Participate' button in the right pane.
- 14**: 'Donate' button in the right pane.
- 15**: 'Get Help' button in the right pane.
- 16**: 'Have you tried Thunderbird Mobile for Android?' text at the bottom of the right pane.

The interface includes a left sidebar with folders like 'Inbox', 'Drafts', 'Sent', 'All Mail', 'Junk', 'Trash', 'Important', 'Starred', 'Taxes 2025', 'UXcel', 'Local Folders', 'Trash', and 'Outbox'. The main pane displays a list of emails with details like sender, subject, and time. The right pane shows a promotional message for Thunderbird with buttons for 'Participate', 'Donate', and 'Get Help'.

1b Navigational flow after searching for subject

The screenshot displays an email client interface with a search bar at the top containing the text "savory". The search results are listed in the main pane, showing several promotional emails from "Savory Spice" to "Kaci McAfee". The interface includes a left sidebar with filters and a right sidebar with a search bar. Red annotations highlight specific UI elements: "2- Immediately goes to second nav bar" points to the search bar in the right sidebar; "3 - Unkown when tabbing, no hilighted state" points to the search results; and "7" and "9" point to the "Toggle timeline" and "Sort by Relevance" buttons respectively.

Search... [K] [Q]

Inbox - mcafeekaci@gmail.com Settings x savory x

2- Immediately goes to second nav bar

Filters

From Me (0) To Me (17)

People

4 Dash Events & Rio Grande Fes... 1

5 Savory Spice 16

Results for: savory

10 of 17 [Toggle timeline] 7

6 Show results as list [E]

8 Sort by Relevance [v]

3 - Unkown when tabbing, no hilighted state

20% OFF Everything Starts Now! * 9

Savory Spice to:Kaci McAfee October 13

[Free Shipping on Orders Over \$35] (https://www.savoryspiceshop.com/)

[Savory Spice] (https://www.savoryspiceshop.com/)

[FIND A STORE] (https://www.savoryspiceshop.com/pages/locations)...

Fall For Flavor Sale: 20% OFF Your Entire Purchase

Savory Spice to:Kaci McAfee October 14

[Free Shipping on Orders Over \$35] (https://www.savoryspiceshop.com/)

[Savory Spice] (https://www.savoryspiceshop.com/)

[FIND A STORE] (https://www.savoryspiceshop.com/pages/locations)...

Ends Tomorrow: 20% OFF Sitewide

Savory Spice to:Kaci McAfee October 18

[Free Shipping on Orders Over \$35] (https://www.savoryspiceshop.com/)

[Savory Spice] (https://www.savoryspiceshop.com/)

[FIND A STORE] (https://www.savoryspiceshop.com/pages/locations)...

Starts Now: Save Up to 20% During the Big Fall Baking Sale

Savory Spice to:Kaci McAfee October 24

[Free Shipping on Orders Over \$49] (https://www.savoryspiceshop.com/)

[Savory Spice] (https://www.savoryspiceshop.com/)

[FIND A STORE] (https://www.savoryspiceshop.com/pages/locations)...

Next Saturday & Sunday in Denver >>

Dash Events & Rio Grande Festivals to:Kaci McAfee July 18

Food Truck Favorites

mcafeekaci@gmail.com: Opening folder [Gmail]/Drafts...

Navigational Focus: Pros

- Highlighted states are prominent in both light and dark mode
 - ****subjective observation, have not used tools to check compliance ratios;**
 - **Nice to have:** would be nice to have an option to make highlighted states more visible, such as making them “bolder” or the option to change the highlighted states to different colors (currently light mode uses blue and dark mode uses orange, there are people who are color blind to both of these colors- highlighted states would just appear absent of color or dull to them)
 - **Last updated: 1/5/26**
 - **MacOS Tahoe 26.2 / Thunderbird App 146.0.1**
 - **Mac Air Built-In Keyboard**

Keyboard Control

2a Unable to interact with preferences using keyboard control

The screenshot shows an email client interface with a search bar at the top. The active email is from Savory Spice, titled "Only Hours Left - Buy 2, Get 1 FREE Spice & Easy!". The email content includes a yellow banner that reads: "To protect your privacy, Thunderbird has blocked remote content in this message." Below this banner is a "Preferences" button with a dropdown arrow. The email body also contains text about loyalty points, shipping, and a "FIND A STORE" section with links for "Savory Spice" and "LOYALTY CLUB". The email ends with a "Manage Preferences" link and the company address: "Savory Spice 1805 E 58TH Ave Unit D Denver, CO 80216. Privacy policy."

Search... [K] [K]

Inbox - mcafeekaci@gmail.com | Address Book | X | savory | X | Only Hours Left - Buy 2, Get 1 FREE | X

Only Hours Left - Buy 2, Get 1 FREE Spice & Easy! 1 Message | Quick Filter

Savory Spice <savory@savoryspiceshop.com> 11/14/25, 1:31 PM

Only Hours Left - Buy 2, Get 1 FREE Spice & Easy!

To protect your privacy, Thunderbird has blocked remote content in this message.

Preferences

Your Loyalty Club points: 143
100 points = \$10 reward. [Login now.](#)

Free Shipping on Orders Over \$49

FIND A STORE | [Savory Spice](#) | LOYALTY CLUB

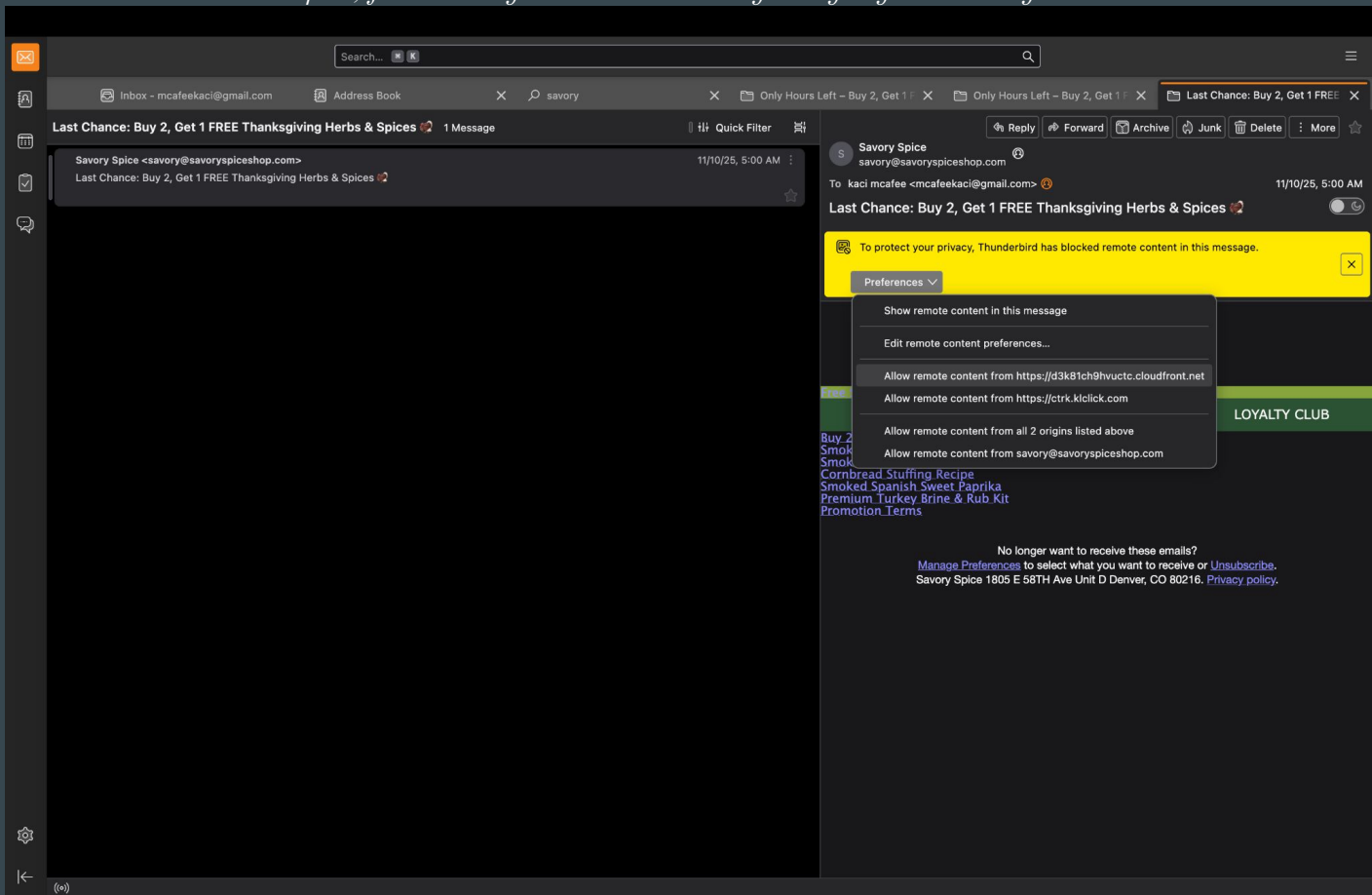
FINAL HOURS! Thanksgiving Deal of the Day Today Buy 2, Get 1 FREE* Spice & Easy Meal Starters Promo Code: EASY. Meals That Feel Like Home Cozy, nostalgic meals that come together quickly, but taste like they've simmered all day.
Taco Soup A cozy, one-pot soup you can make in just 30 minutes. Each spoonful is rich with savory goodness and the familiar spices of Taco Seasoning, a customer favorite.
Sunday Pot Roast A cozy, herb-filled blend made for your slow cooker and perfect for busy days when you crave the comfort of a homemade meal.
Sun-Dried Tomato Minestrone Bring everyone to the table with hearty soup made with a handful of ingredients and a few quick steps.
Premium Turkey Brine & Rub Kit Make this year's turkey unforgettable with three easy steps. Brine, season, and roast to perfection for a flavor-packed centerpiece that brings everyone to the table. \$20.00

*Offer valid online and at participating stores only. Must use code EASY at checkout for buy 2 get 1 free Spice & Easy. Excludes Gift Sets, select bundles, 3-counts, and collections. Limit 6 free Spice & Easy. Offer cannot be combined with Loyalty Rewards. No adjustments on past purchases. No rain checks. This offer expires 11:59 PM MST, November 14, 2025.

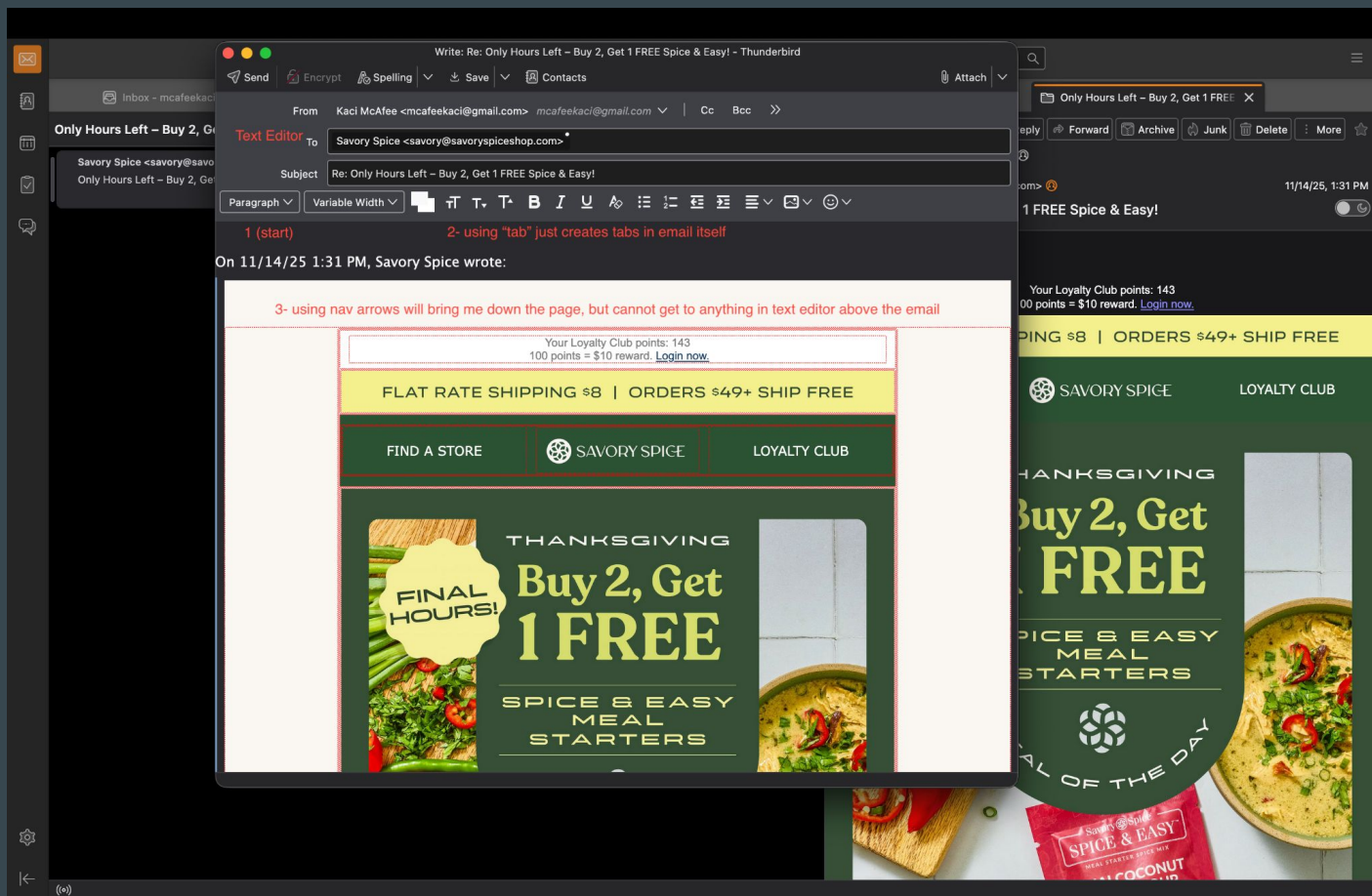
No longer want to receive these emails?
[Manage Preferences](#) to select what you want to receive or [Unsubscribe](#).
Savory Spice 1805 E 58TH Ave Unit D Denver, CO 80216. [Privacy policy](#).

mcafeekaci@gmail.com is up to date

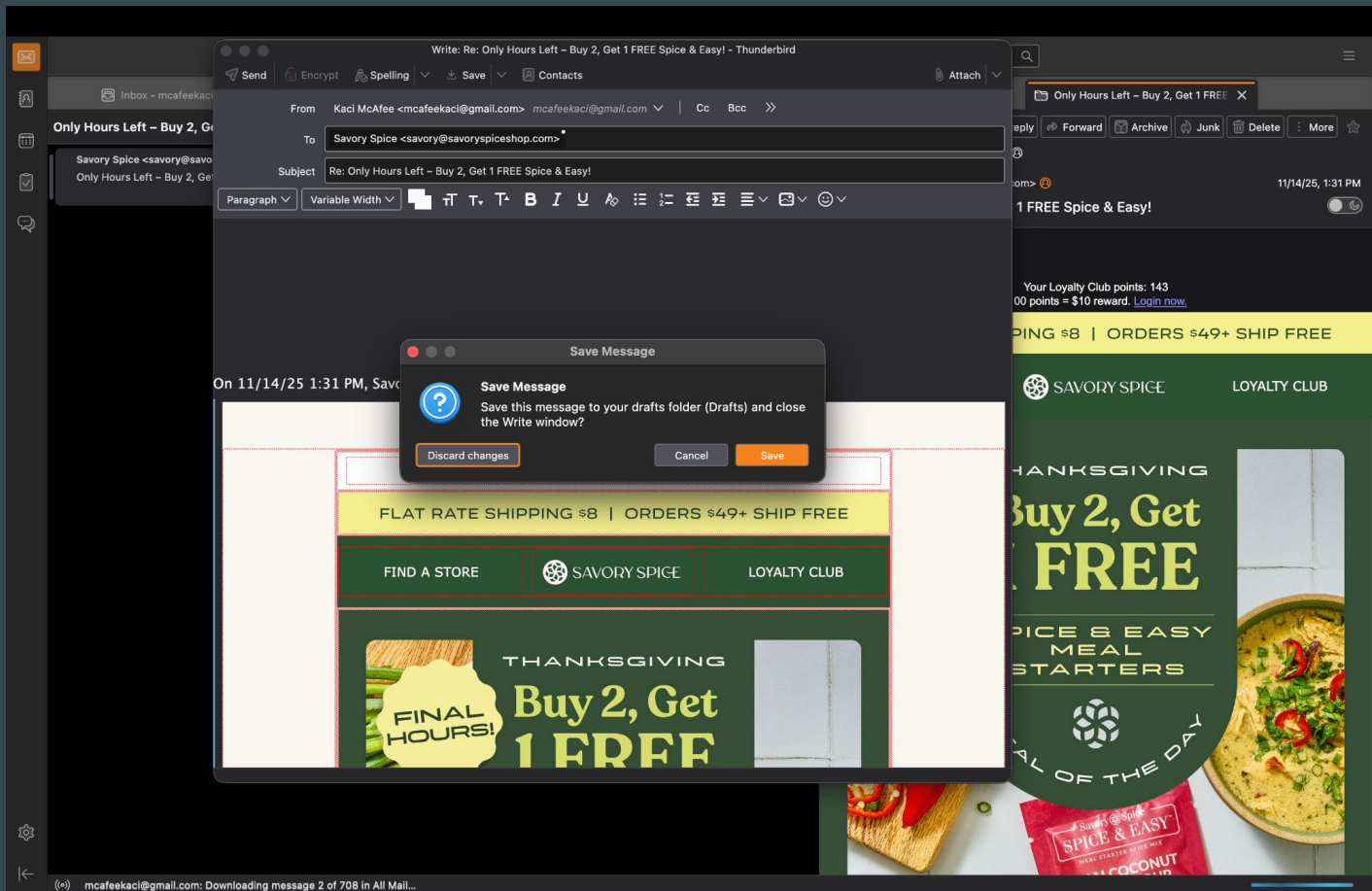
2b However, after using mouse to open preferences, I AM able to use nav arrows to move between options and use the enter key to select – therefore, just missing initial interactivity using keyboard navigation



2e After using “enter” to reply to an email, brings me to #1 on the page - tabbing/nav arrows take me to #2 and #3, but I am unable to edit the top portion of the email where things like “to/from” and text editor is



2d After using a mouse to close out message, I am able to use nav arrows and enter to interact with options



2e I can navigate between tabs using keyboard control, but unable to close them out

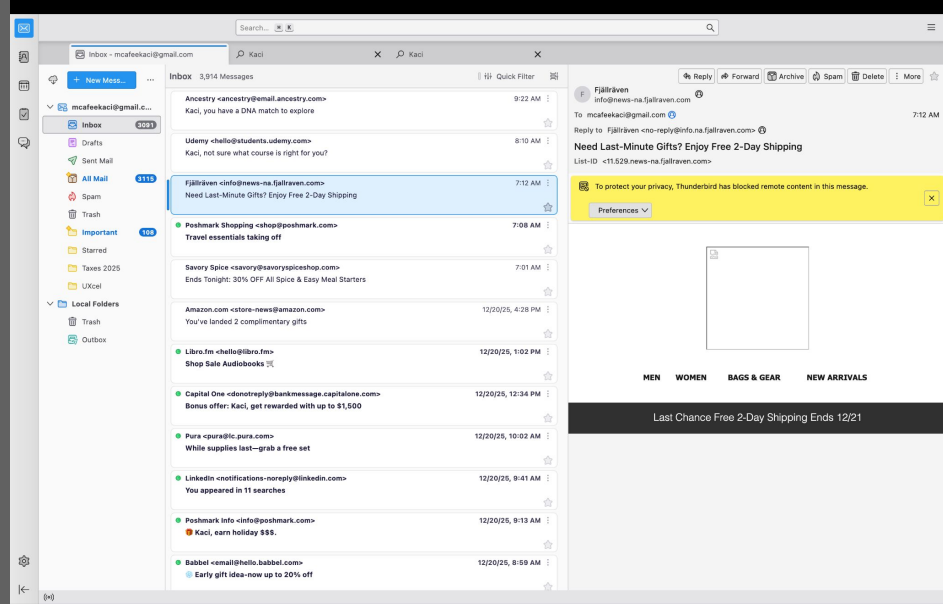
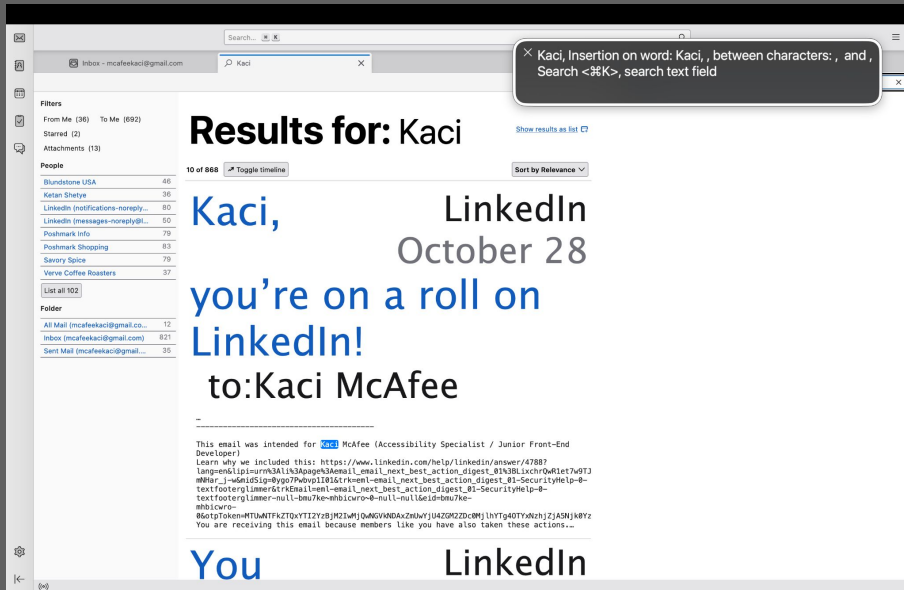
The screenshot shows a Gmail interface with search results for the term "udemy". The search bar at the top contains "udemy". The left sidebar shows filters for "From Me (0)" and "To Me (43)", and a list of people and folders. The main content area displays three search results:

- Results for: udemy** (116 results, sorted by Relevance)
- Refer a friend, save 20% on your first year of Udemy!** to: Kaci McAfee (Udemy, July 31)
- Kaci, turn your wishlist into career-advancing skills** to: Kaci McAfee (Udemy, October 20)
- Special offer: Make those wishes come true** to: Kaci McAfee (Udemy, December 8)

The first result is a promotional email from Udemy. The subject line is "Refer a friend, save 20% on your first year of Udemy!". The recipient is "Kaci McAfee". The email body contains a long URL: [https://ablink.students.udemy.com/ls/click?upn=u001.MPWQNoKfOWuci10G4G58ljn8X0B2-2FwB4C6mdz6rNETDF6HC12v8G1gWJNbbypxb-2BDb7mW0sjsqy1zEZ17mc-2B5Pd-2BYke1BFY42CZc0TTOECLNlEa9yZDdvu1nk10hfqtLun-2BEGmJjtAAJ3xpECUmLME:5Ny9jCkan9yWh9z42Jt90M3x0WhUEKcw9mNR6npQ5CJ-2BEgNwRqgERzKBpWLR5zy8ee01tVayTtVBRK3Mh50ZP1S5nh9YSL-2BAsQK23puWDFAGHTRIFsqAW1SrLqEgs1vmvWfnSWD-2Btw3YqLuRUGg6kvjHH6vqHNbMjxqD25bbsKsGen16dyUA-3D-3de3Gh_xMgo0i-2Bx1q6daPD40j7F95voV0z-2BIMFTsLL91E4d3BMN7z82F5Lo-2FF0JISx7ekNMhoQ33sm-2FYNYqDtL-2BviFzNuM-2FiBK29qzL4-2F97Mh-2FUATuYJcra5GMqMzWg1g3teJ823W1Jc5qAM0H7MfoDVYbeAoxwCnyCmIaZauQtr1BjbmA0pykLj28f5r0kVuT052FmJ8AfmfmjntKbqa8F5LjCsHkxmp00f407MvqIU-2Bw4LSEZLVDPxreB5Pm0SLUF0LDJ0CG7mD2qH5TfVnycfYKlcWcIz1X1ACpwJ7ZUWve7aHIfntwQ3wnxMytSTA92Bt66tqVluFSM:2P3L0bnlwmkKABStLhxzbXMArKX06wXooWcJ36I-2BV1DFJNmb1EM9L1LSIuaMDCu5JHTBgZkoIvu1LhYg91YPBmY7116Ys1jA56GcFp-2F73mTKXpa-2Fcto7mrv2LqL26u1vZwx1017KUZD4os7G941-2BIewnEtat9tkyZLWW-2Bucobhg8ytjV5vcjhrL5uagTvnQUSIZ5nqDqboqA1DRWwaytrFfpk2XYvc2mZ9xh5b-2B5-2BkqJk1rE-2F0MQM07b95I26r5PdtkRcQqenQ-3D-3D\)...](https://ablink.students.udemy.com/ls/click?upn=u001.MPWQNoKfOWuci10G4G58ljn8X0B2-2FwB4C6mdz6rNETDF6HC12v8G1gWJNbbypxb-2BDb7mW0sjsqy1zEZ17mc-2B5Pd-2BYke1BFY42CZc0TTOECLNlEa9yZDdvu1nk10hfqtLun-2BEGmJjtAAJ3xpECUmLME:5Ny9jCkan9yWh9z42Jt90M3x0WhUEKcw9mNR6npQ5CJ-2BEgNwRqgERzKBpWLR5zy8ee01tVayTtVBRK3Mh50ZP1S5nh9YSL-2BAsQK23puWDFAGHTRIFsqAW1SrLqEgs1vmvWfnSWD-2Btw3YqLuRUGg6kvjHH6vqHNbMjxqD25bbsKsGen16dyUA-3D-3de3Gh_xMgo0i-2Bx1q6daPD40j7F95voV0z-2BIMFTsLL91E4d3BMN7z82F5Lo-2FF0JISx7ekNMhoQ33sm-2FYNYqDtL-2BviFzNuM-2FiBK29qzL4-2F97Mh-2FUATuYJcra5GMqMzWg1g3teJ823W1Jc5qAM0H7MfoDVYbeAoxwCnyCmIaZauQtr1BjbmA0pykLj28f5r0kVuT052FmJ8AfmfmjntKbqa8F5LjCsHkxmp00f407MvqIU-2Bw4LSEZLVDPxreB5Pm0SLUF0LDJ0CG7mD2qH5TfVnycfYKlcWcIz1X1ACpwJ7ZUWve7aHIfntwQ3wnxMytSTA92Bt66tqVluFSM:2P3L0bnlwmkKABStLhxzbXMArKX06wXooWcJ36I-2BV1DFJNmb1EM9L1LSIuaMDCu5JHTBgZkoIvu1LhYg91YPBmY7116Ys1jA56GcFp-2F73mTKXpa-2Fcto7mrv2LqL26u1vZwx1017KUZD4os7G941-2BIewnEtat9tkyZLWW-2Bucobhg8ytjV5vcjhrL5uagTvnQUSIZ5nqDqboqA1DRWwaytrFfpk2XYvc2mZ9xh5b-2B5-2BkqJk1rE-2F0MQM07b95I26r5PdtkRcQqenQ-3D-3D)...)

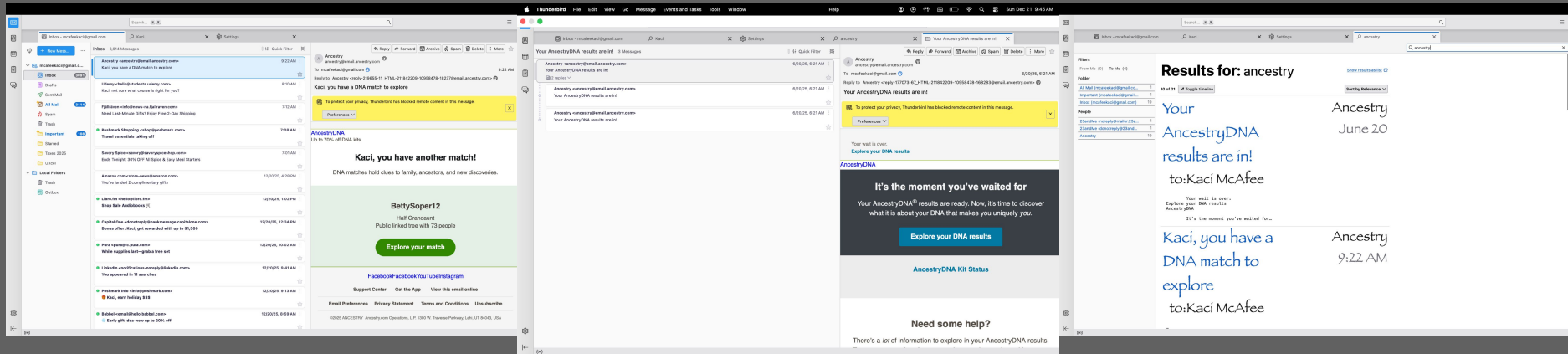
2f Thunderbird Font Sizes

Both are set to “64 pt” - but you can only tell after I had searched something (image on left)



2g Thunderbird Font Sizes

Changed to Papyrus, but again can only tell when searching - doesn't change the actual email or navigation font.



Keyboard Control (Tabbing/Nav. Arrows): Pros

- Able to use standard keyboard navigation between most areas to interact with emails and use global search bar (with some exceptions, detailed in “**Keyboard Control: Flaws**”)
 - **Last updated: 1/5/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1
 - Mac Air Built-In Keyboard
- Radio Buttons and Filters- focus remains on section when tabbing, and can change focus state using navigational arrows and select filters using “enter”
 - **Last updated: 1/5/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1
 - Mac Air Built-In Keyboard

Screen Reader Compatibility

3a Voice Over and Thunderbird - unnecessary verbiage (*global search bar*)

The screenshot shows the Thunderbird email interface with a search for 'savory'. The search results are displayed in a list format. The first result is 'New Holiday Bundles Just Dropped' from Savory Spice to Kaci McAfee, dated 5:00 AM. The second result is 'Crave The Unexpected With FREE Bourbon Barrel Smoked Salt' from Savory Spice to Kaci McAfee, dated October 8. The third result is 'You're a Cardamom VIP!' from Savory Spice to Kaci McAfee, dated October 5. The fourth result is 'Peppermint Sugars Are Back for the Season!' from Savory Spice to Kaci McAfee, dated October 12. The fifth result is 'Dash Events & Rio Grande Festivals' from Savory Spice to Kaci McAfee, dated July 18. The search bar at the top right contains the text 'Q, savory|'. A white callout box at the bottom left contains the text: '× VoiceOver on Thunderbird, savory, window savory, Insertion on word: savory, , between characters: , and , Search <⌘K>, search text field, has keyboard focus'. The interface also shows a 'Filters' sidebar on the left and a 'Results for: savory' header at the top of the main content area.

3b Voice Over and Thunderbird - unnecessary verbiage (on "From:")

Countdown to success: Just one week to the Spring ASHA Virtual Career Fair 2 Messages

ASHA Career Portal <careerportal@mail.asha.org>
Countdown to success: Just one week to the Spring ASHA Virtual Career Fair
4/2/25, 4:02 PM

ASHA Career Portal <careerportal@mail.asha.org>
Countdown to success: Just one week to the Spring ASHA Virtual Career Fair
4/2/25, 4:02 PM

ASHA Career Portal <careerportal@mail.asha.org>
To: mcafeekaci@gmail.com
4/2/25, 4:02 PM

Reply to ASHA Career Portal <reply-fee5107477630c7d-32_HTML-48203847-526001768-671@mail.asha.org>

Countdown to success: Just one week to the Spring ASHA Virtual Career Fair

To protect your privacy, Thunderbird has blocked remote content in this message.

Register today. | View in Browser
Spring ASHA Virtual Career Fair

Get hired without leaving home!

Kaci,

With just 1 week to go until the Spring ASHA Virtual Career Fair, time is running out to register! [Secure your spot](#) at this **FREE** hiring event today.

Why attend?

- **Explore opportunities** for SLPs, SLPAs, and CF-SLPs.
- **Interview** with [top employers](#) for positions in clinics, health care, hospitals, private practice, schools, skilled nursing, and telepractice.
- Attend webinars, and get expert **career advice**.
- Participate in a live **career development workshop: Thriving as an Introverted SLP**.
- **Win prizes**—including an ASHA Learning Pass subscription!

× ASHA Career Portal, and 2 more items, list item, (1 of 1), list From 1 item

3c Voice Over and Thunderbird - unnecessary verbiage (on "To:")

Search... [magnifying glass icon]

Countdown to success: Just one week to the Spring ASHA Virtual Career Fair 2 Messages Quick Filter

ASHA Career Portal <careerportal@mail.asha.org> 4/2/25, 4:02 PM
Countdown to success: Just one week to the Spring ASHA Virtual Career Fair
1 reply

ASHA Career Portal <careerportal@mail.asha.org> 4/2/25, 4:02 PM
Countdown to success: Just one week to the Spring ASHA Virtual Career Fair

ASHA Career Portal <careerportal@mail.asha.org>
To: mcafeekaci@gmail.com
Reply to: ASHA Career Portal <reply-fec6107477630c7d-32_HTML-48203847-526001768-671@mail.asha.org>
Countdown to success: Just one week to the Spring ASHA Virtual Career Fair

To protect your privacy, Thunderbird has blocked remote content in this message.
Preferences

[Register today](#) | [View in Browser](#)
[Spring ASHA Virtual Career Fair](#)

Get hired without leaving home!

Kaci,

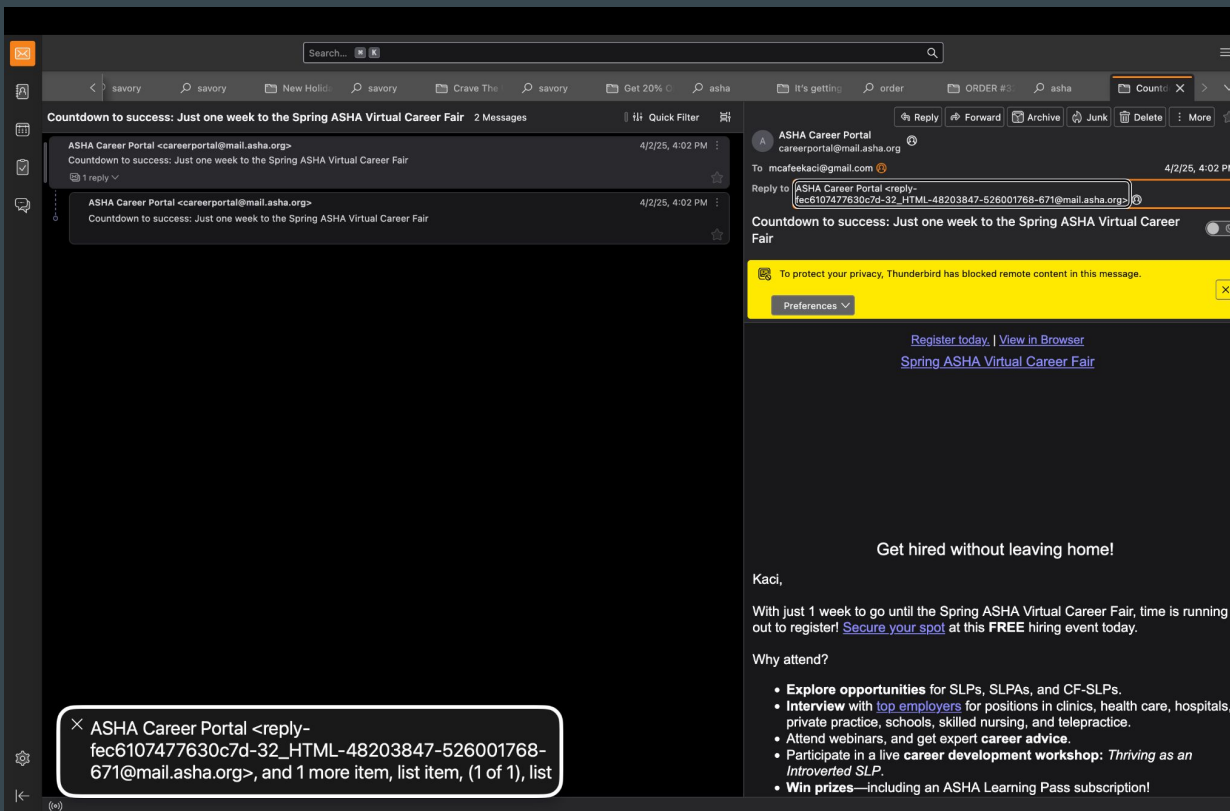
With just 1 week to go until the Spring ASHA Virtual Career Fair, time is running out to register! [Secure your spot](#) at this **FREE** hiring event today.

Why attend?

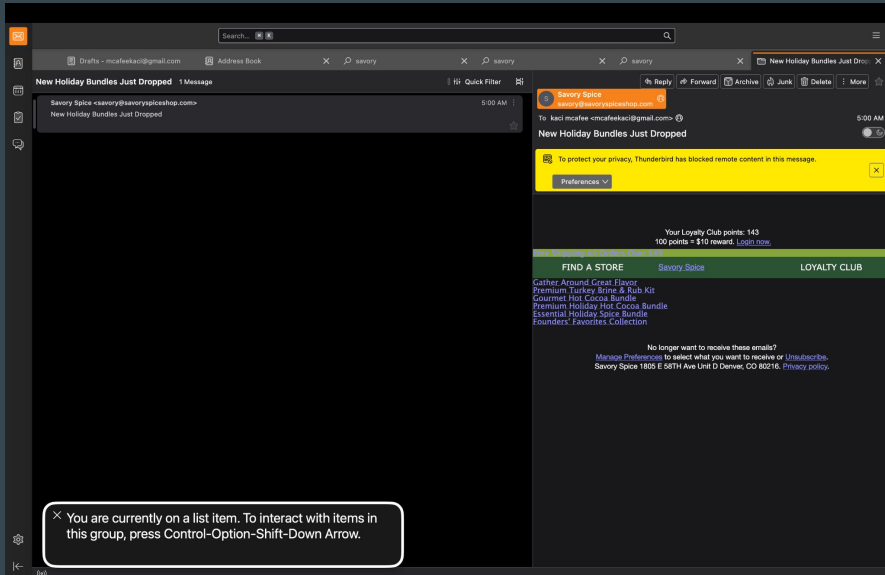
- Explore opportunities for SLPs, SLPAs, and CF-SLPs.
- Interview with [top employers](#) for positions in clinics, health care, hospitals, private practice, schools, skilled nursing, and telepractice.
- Attend webinars, and get expert **career advice**.
- Participate in a live **career development workshop**: *Thriving as an Introverted SLP*.
- Win prizes—including an ASHA Learning Pass subscription!

mcafeekaci@gmail.com, and 1 more item, list item, (1 of 1), list To 1 item

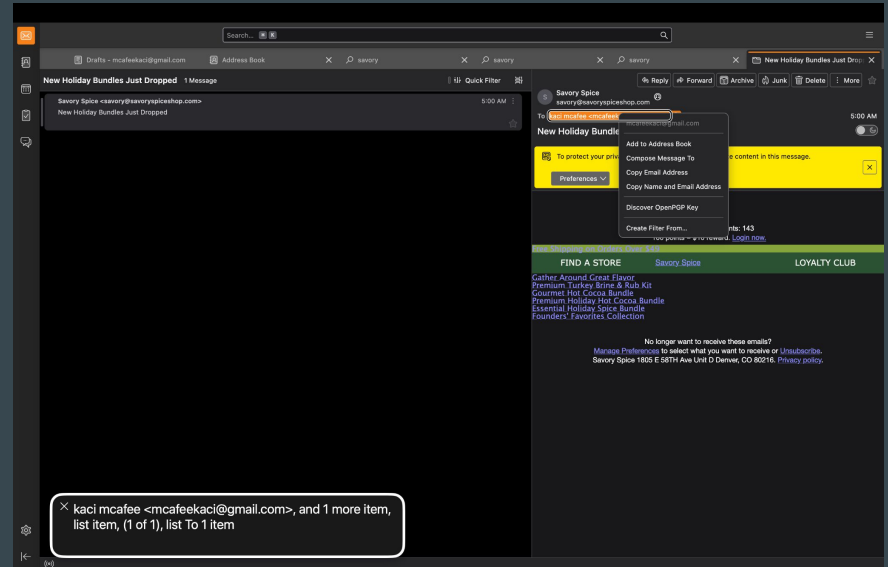
3d Voice Over and Thunderbird - unnecessary verbiage (on "Reply to:")



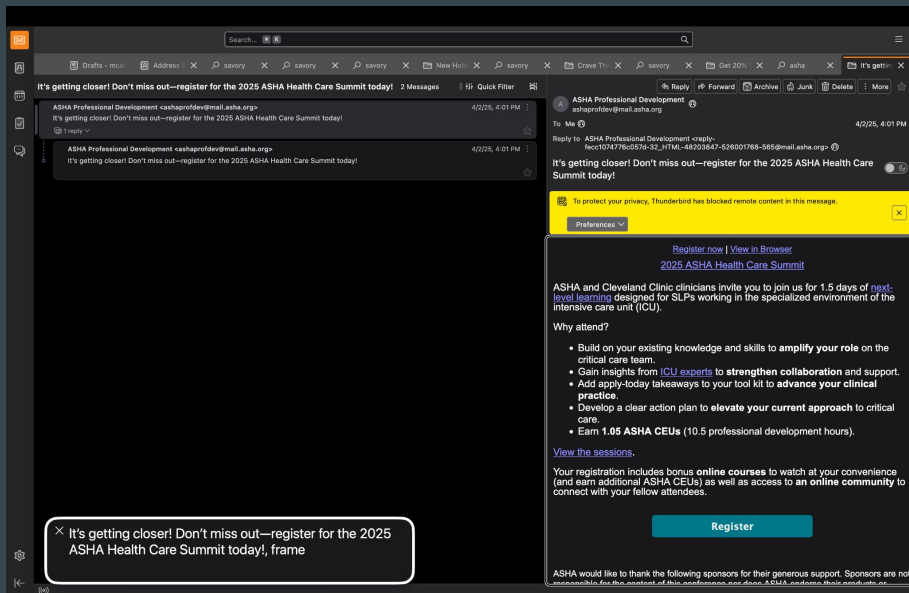
4a Voice Over and Thunderbird - reading who the message is **from**



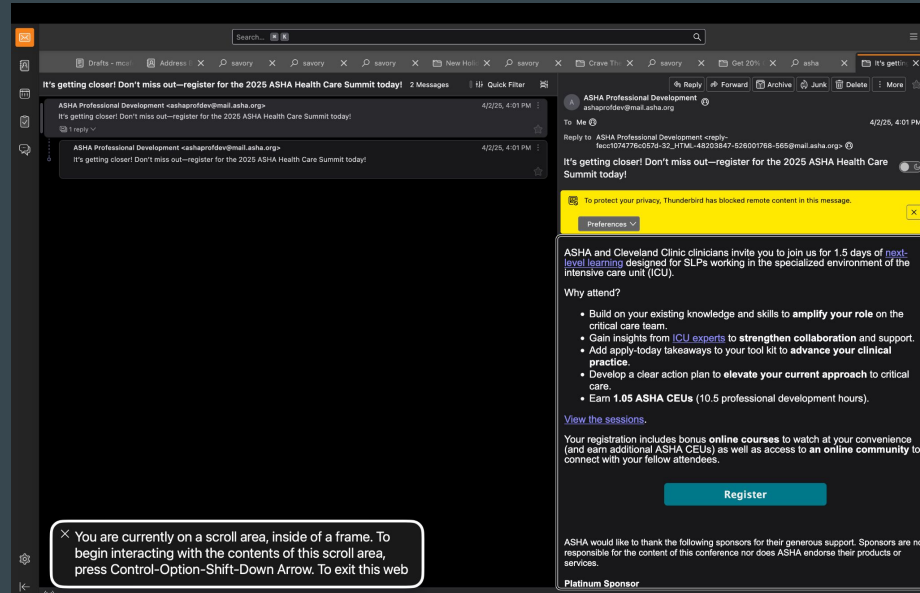
4b Voice Over and Thunderbird - reading who the message is **to**



5a Voice Over - Step #1 - Clicked on content frame to read message, and VO read the message banner title instead

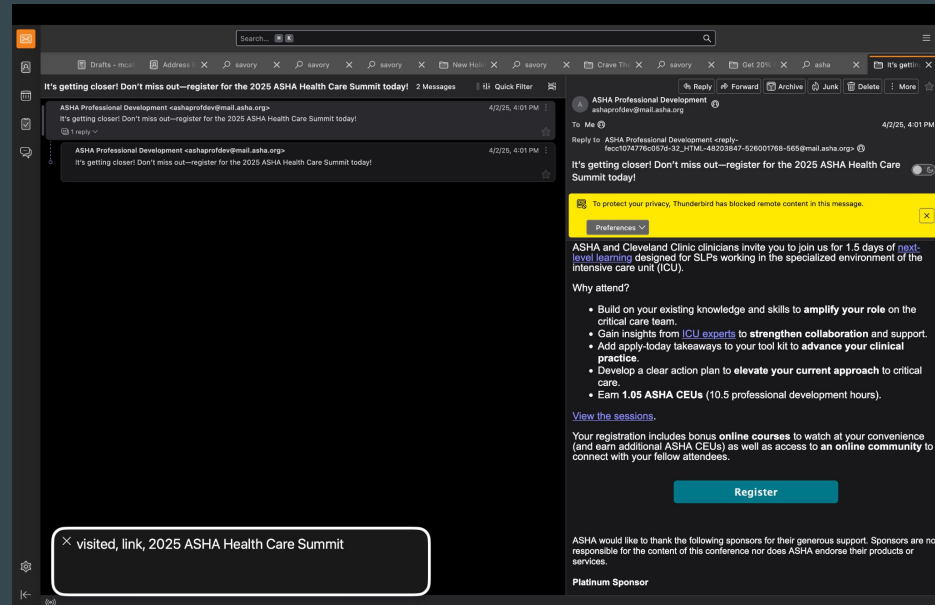
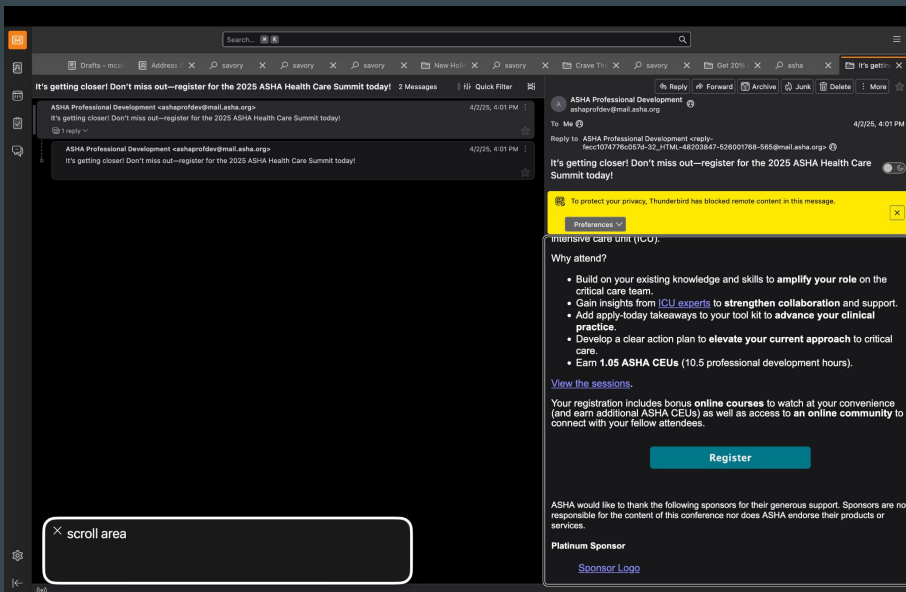


5b Voice Over - Step #2 - After clicking on content frame to read message, VO said following:



5c Voice Over - **Step #3** - After using command, VO (usually) says following :
***still does not read aloud message content despite clicking/scrolling/tabbing through content*

5d Voice Over - **Step #3** - After using command, VO (sometimes) says following :
***still does not read aloud message content despite clicking/scrolling/tabbing through content*





Thunderbird - not reading message body

The screenshot shows the Thunderbird email client interface. The left sidebar displays folders for 'mcafeekaci@gmail.c...' (Inbox: 3230, Drafts, Sent Mail) and 'Local Folders' (Trash, Outbox). The main pane shows a list of messages in the 'Sent Mail' folder. The selected message is from 'Kaci McAfee' to 'mcafeekaci@outlook.com' with the subject 'Test'. The message body contains the text 'Test test test test'. A dark grey frame with a close button and the text 'Test, frame' is overlaid on the bottom right of the message body.

Search... [magnifying glass icon]

+ New Mess... ...

Sent Mail 127 Messages [Quick Filter icon]

Filter messages... [magnifying glass icon]

mcafeekaci@gmail.c... [magnifying glass icon]

Inbox 3230

Drafts

Sent Mail

All Mail 3265

Spam 72

Trash 171

Important 109

Starred

Taxes 2025

UXcel

Local Folders

Trash

Outbox

Kaci McAfee
mcafeekaci@gmail.com
To: mcafeekaci@outlook.com
4:00 PM

Test

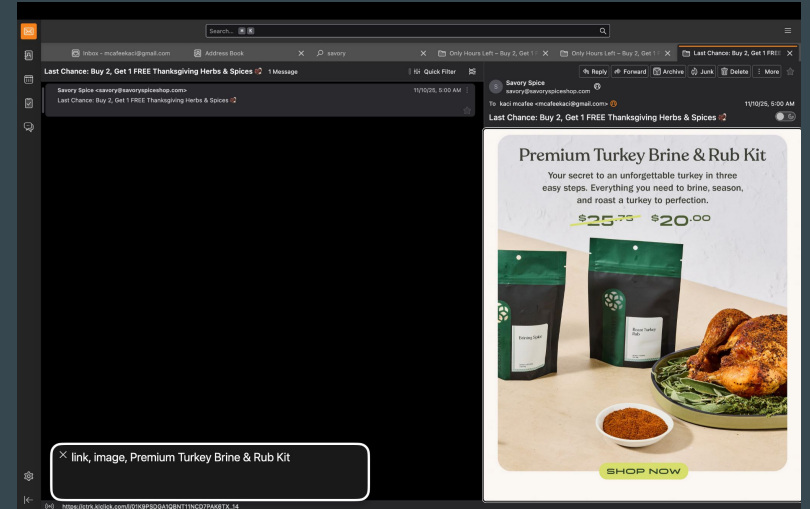
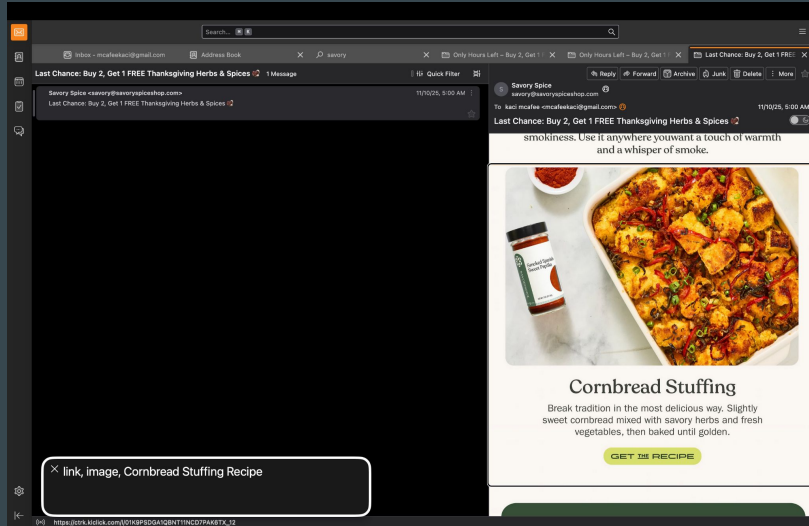
Test test test test

Test, frame

From	Date	Subject
Erin Patrick <erin.patrick@ssg-healthcare.com>	8/22/25, 10:59 AM	Re: Payroll
Erin Patrick <erin.patrick@ssg-healthcare.com>	8/22/25, 11:03 AM	Re: Payroll
HR Payroll <hr.payroll@ssg-healthcare.com>	8/25/25, 6:52 AM	Re: Payroll
HR Payroll <hr.payroll@ssg-healthcare.com>	8/26/25, 4:53 PM	Re: Payroll
taxdly2rqngtmim63r4bq5kao8fo29k4h4e5k1-mcafeekaci@gmail.com@544893m.gitkraken.com	8/24/25, 7:19 AM	unsubscribe
unsubscribe@unsubscribe.bebee.com	8/20/25, 9:17 AM	beBee Alerts Unsubscribe - aHR0cHM6Ly91cy5lZjZlZS5jb20vYVxlcncRZP2U9Z2lXKcGRpSTZJbHBGZEhkdidsQmxS...
kgoates@ppid.org	8/20/25, 8:55 AM	Website Accessibility Volunteer
list-unsubscribe+841954363_100604_1289212_9fjPe465W6@emarsys.net	8/5/25, 10:20 PM	unsubscribe
AbeBooks Support <info+500at00000ESq29AAD@support.abebooks.com>	7/24/25, 1:03 PM	Re: AbeBooks Case #43109981 Correspondence
tours@wolfeducation.org	7/21/25, 10:45 AM	Free Website Accessibility Audit
contact@emmasbookshop.com	7/21/25, 10:42 AM	Free Website Accessibility Audit
Kaci McAfee <mcafeekaci@gmail.com>	7/19/25, 8:43 AM	

→ (0)

6a Voice Over and Thunderbird - if text is in image, reads some (but not entire message)



6b Voice Over and Thunderbird - if text is in image, reads some (but not entire message) –
***in this image, it read the title of the email instead of the reviews*

The screenshot shows a Thunderbird email client interface. The email is from Savory Spice (savory@savoryspiceshop.com) with the subject "Last Chance: Buy 2, Get 1 FREE Thanksgiving Herbs & Spices". The email content features a promotional banner with the following text:

WHAT PEOPLE ARE SAYING

★★★★★
“Great, unmistakable smoked flavor. Better than the dull, bland, and stale ones sitting on grocery store shelves”
– RICHARD M.

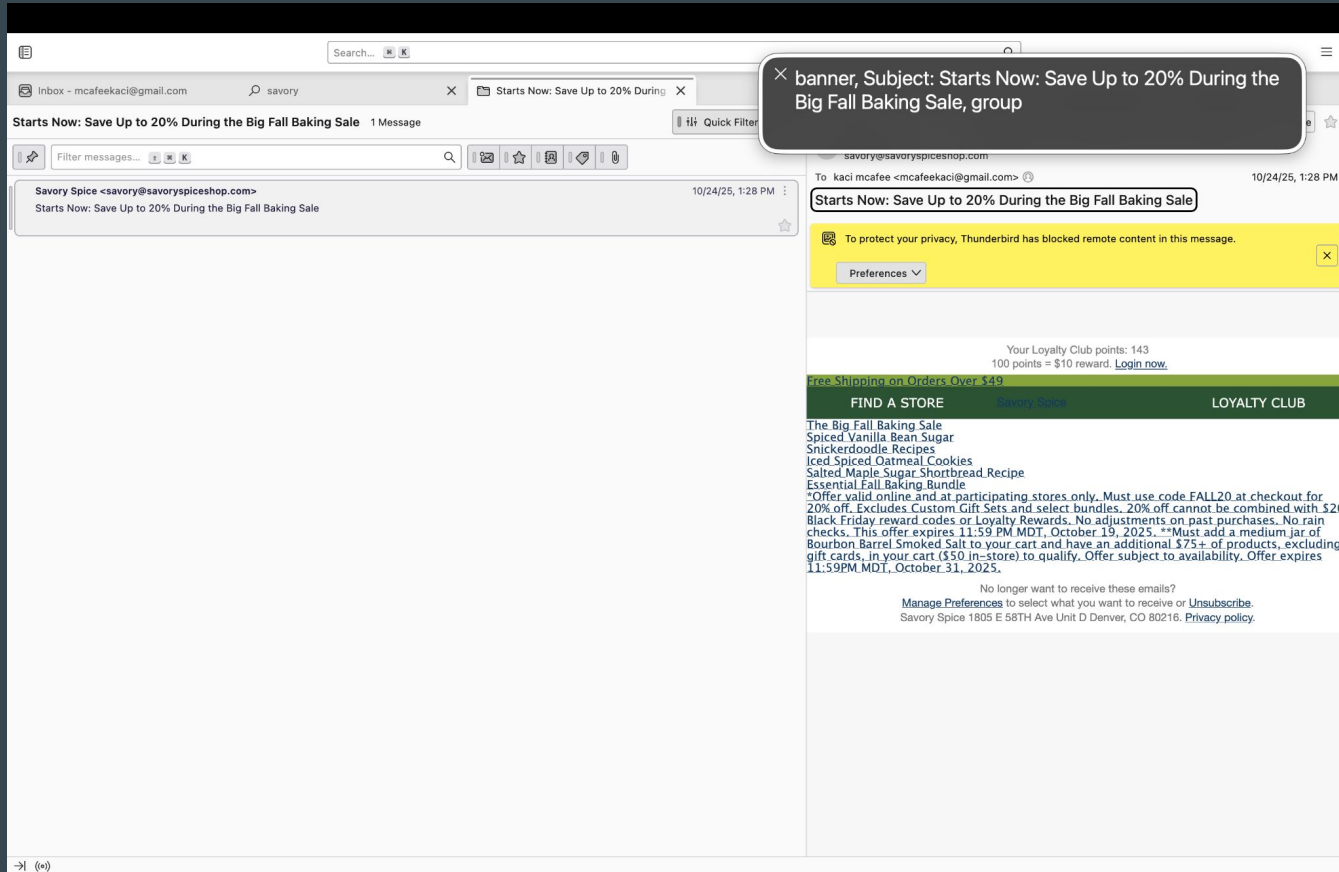
★★★★★
“A staple in my kitchen. The subtle smokiness adds depth without overpowering dishes.”
– KRISTY K.

★★★★★
“I never thought paprika had a taste before purchasing this. I always keep my pantry stocked with it!”
– HANNA M.

SHOP SWEET PAPRIKA

A tooltip at the bottom left of the screenshot reads: "Thunderbird, Last Chance: Buy 2, Get 1 FREE Thanksgiving Herbs & Spices, window, link, image, Smoked Spanish Sweet Paprika, has keyboard focus".

6c Cannot select “preferences” to be read via screen reader only title or body of message (even when using mouse)



Screen Reader: Pros

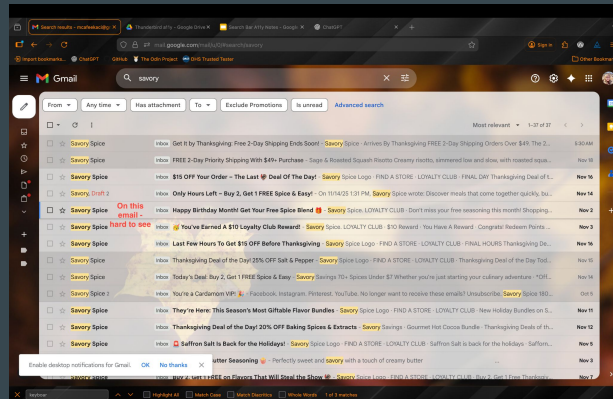
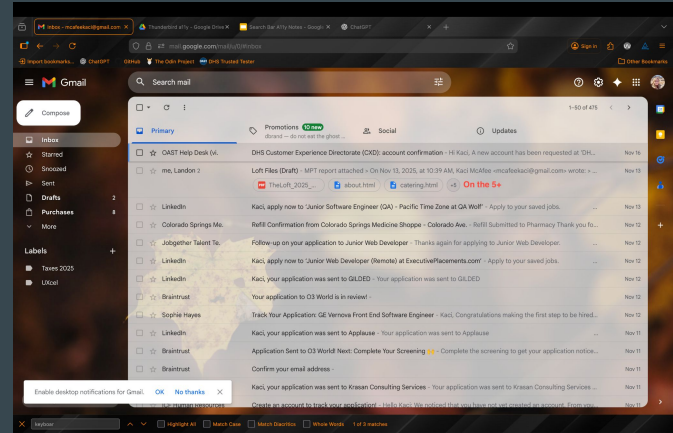
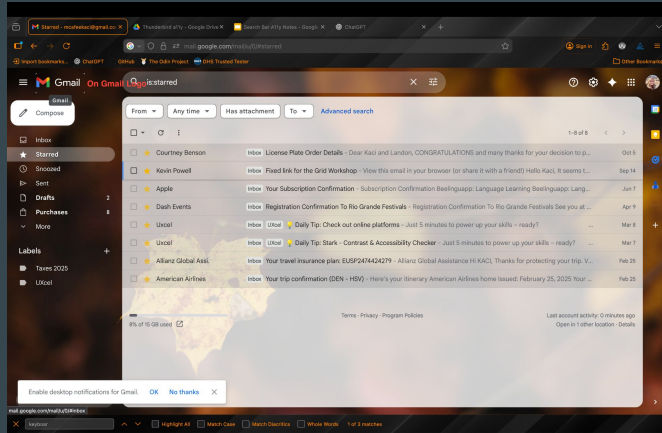
- Security -- Tells you password won't be read out loud in voice over
 - **Last updated: 10/31/25**
 - MacOS Tahoe 26.0 / Thunderbird App 143.0.1
 - VoiceOver (Tahoe 26.0)
- will read “banner- subject...” for subject line (however, unsure if “banner” is necessary/expected pattern for subject line)
 - **Last updated: 10/31/25**
 - MacOS Tahoe 26.0 / Thunderbird App 143.0.1
 - VoiceOver (Tahoe 26.0)
- will read state if you have already visited a link before so you know if you have visited it before (see **image 5d**)
 - **Last updated: 11/4/25**
 - MacOS Tahoe 26.0 / Thunderbird App 143.0.1
 - VoiceOver (Tahoe 26.0)

Comparing Thunderbird to Gmail

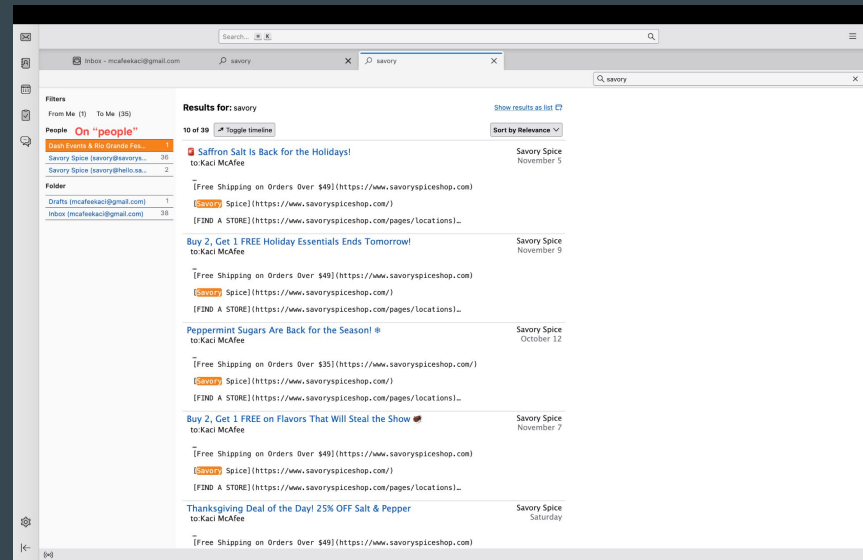
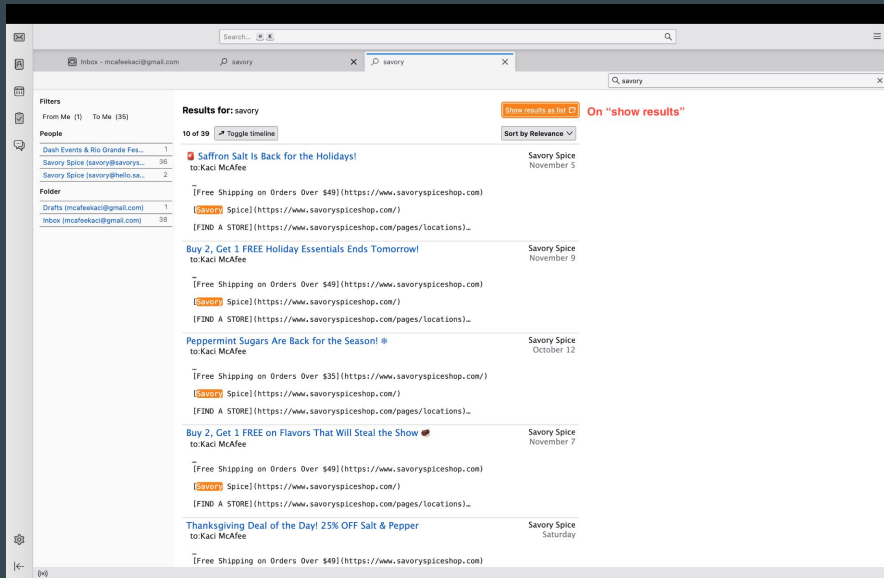
Navigational Focus

(Gmail)

7a Highlighted states in Gmail

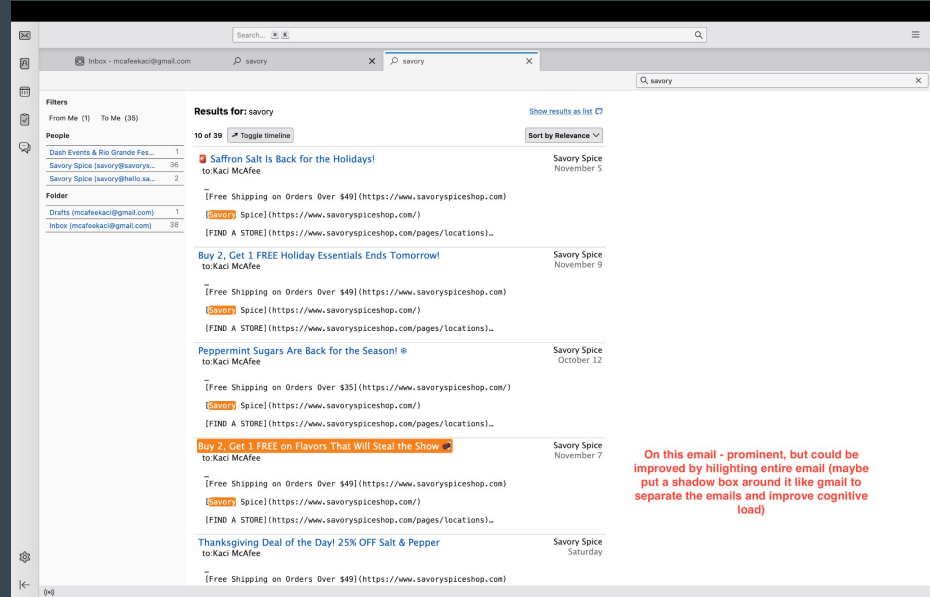
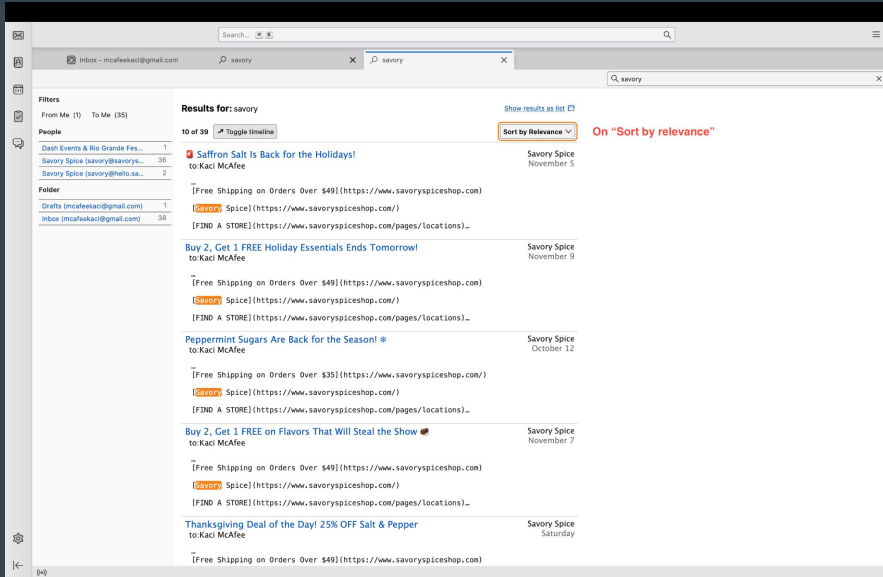


7b Highlighted states in Thunderbird light theme

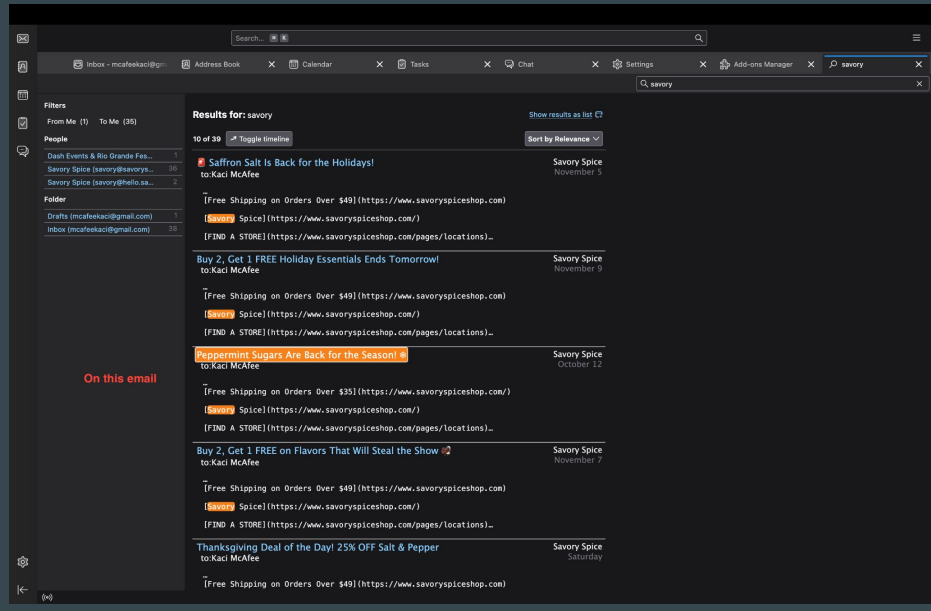
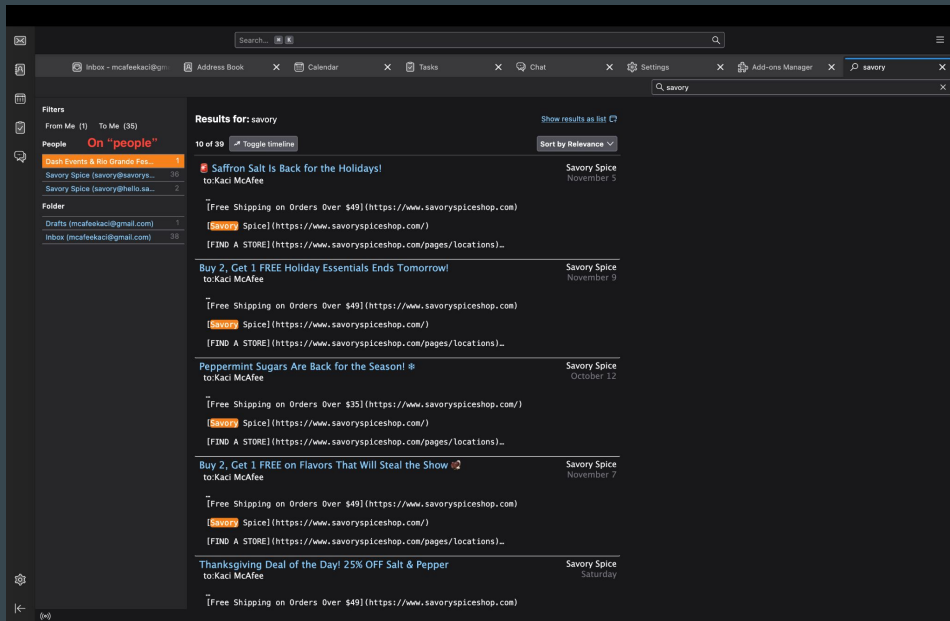




Highlighted states in Thunderbird light theme



7d Highlighted states in Thunderbird dark theme



8a Thunderbird light/dark mode

The screenshot shows the Thunderbird Settings window with the 'Appearance' section selected. The 'Message reader style' section is expanded, showing the following options:

- Enable **dark** message mode
 - Force the message body to follow **dark** themes
- Show **dark** message mode toggle
 - Show a toggle in the message header to quickly disable the **dark** message mode

The 'Theme' dropdown is set to 'Thunderbird', and the 'Variant' dropdown is set to 'Light'. A search bar at the top right contains the text 'dark'. A preview of a message is shown below the settings, with a 'dark' toggle visible in the message header. The message preview shows three messages:

- 10:42 Florian: Hi! 😊
- 10:42 What's up?
- 10:43 Patrick: I'm trying Thunderbird! 😊

Annotations in red text provide additional context:

- 'provides example of what light/dark theme would look like' points to the message preview.
- 'shows "dark" even though hidden in toggle' points to the 'dark' variant label in the 'Variant' dropdown.

The status bar at the bottom indicates 'mcafeekaci@gmail.com is up to date'.

8b Thunderbird light/dark mode

The screenshot shows the Thunderbird Settings window for the account 'mcafeekaci@gmail.com'. The 'Appearance' settings are expanded, showing options for 'Preferred address display format' (Full name and email address, Email only, Name only) and 'Show only display name for people in my address book' (checked). Under 'Message reader style', 'Enable dark message mode' and 'Show dark message mode toggle' are both checked. A 'dark' theme is selected in the 'Theme' dropdown, and a 'Dark' variant is selected in the 'Variant' dropdown. A preview window shows a message conversation in dark mode with text: '10:42 Florian Hi! 🤔', '10:42 What's up?', and '10:43 Patrick I'm trying Thunderbird! 😊'. A red text annotation on the right says 'provides example of what light/dark theme would look like'. The bottom status bar shows 'mcafeekaci@gmail.com is up to date'.

Sc Thunderbird light/dark mode

The screenshot shows the Thunderbird Settings window for the account 'mcafeekaci@gmail.com'. The 'Appearance' section is active, displaying various settings. A search bar at the top right contains the text 'dark'. The 'Message reader style' section is expanded, showing the following options:

- Enable **dark** message mode
Force the message body to follow **dark** themes
- Show **dark** message mode toggle
Show a toggle in the message header to quickly disable the **dark** message mode

The 'Theme' dropdown is set to 'Dark'. A preview window shows a message from 'Florian' with a dark background. A color selection menu is open over the preview, with 'Blue' selected. The 'Variant' dropdown is also set to 'Blue'. A red text annotation 'Customizable color- improves a11y' is placed below the variant dropdown.

Other settings visible include:

- Preferred address display format:** Full name and email address, Email only, Name only
- Show only display name for people in my address book
- Determine how Thunderbird handles return receipts:** Return Receipts...

The left sidebar shows navigation options: General, Appearance, Composition, Privacy & Security, Chat, Export for Mobile, Account Settings, and Add-ons and Themes.

Navigational Focus Observations

(compared to GMAIL)

- Thunderbird's highlighted states of interactivity (both in light and dark theme) are much more visible than Gmail (currently have a picture theme on Gmail, did not check their basic themes- doesn't really matter since TB seems good- this observation is subjective, I did not run the TB colors through AXE to see if they are WCAG compliant yet) (see **images 7a-7c**)
 - **Last updated: 11/19/25**
 - MacOS Tahoe 26.0 / Thunderbird App 143.0.1 || Firefox 145.0.2
 - Mac Air Built-in Keyboard
- Thunderbird does an awesome job of implementing light/dark mode- provides examples of what it would look like before applying changes and includes options to improve visibility by customizing colors (see **images 8a-8d**)
 - **Last updated: 11/19/25**
 - MacOS Tahoe 26.0 / Thunderbird App 143.0.1 || Firefox 145.0.2
 - Mac Air Built-in Keyboard

Keyboard Control

(Gmail)

9a Gmail keyboard control after using global search bar

The screenshot shows a Gmail search results page for the query "savory". The search bar at the top contains "savory 1- searched 'savory'". Below the search bar, there are filters for "From", "Any time", "Has attachment", "To", "Exclude Promotions", and "Is unread". The search results are sorted by "Most relevant" and show 1-37 of 37 results. A red text overlay reads "2- immediately able to navigate emails with nav arrows". The first email in the list is from "Savory Spice" with the subject "Get It by Thanksgiving: Free 2-Day Shipping Ends Soon!". Other emails include "FREE 2-Day Priority Shipping With \$49+ Purchase", "\$15 OFF Your Order - The Last Deal Of The Day!", "Thanksgiving Deal of the Day! 25% OFF Salt & Pepper", "Last Few Hours To Get \$15 OFF Before Thanksgiving", "You've Earned A \$10 Loyalty Club Reward!", "Only Hours Left - Buy 2, Get 1 FREE Spice & Easy!", "Happy Birthday Month! Get Your Free Spice Blend", "Today's Deal: Buy 2, Get 1 FREE Spice & Easy - Savory Savings 70+ Spices Under \$7", "You're a Cardamom VIP!", "Buy 2, Get 1 FREE Holiday Essentials Ends Tomorrow!", "They're Here: This Season's Most Giftable Flavor Bundles", "Saffron Salt Is Back for the Holidays!", "Thanksgiving Deal of the Day! 20% OFF Baking Spices & Extracts", "NEW! Honey Butter Seasoning", and "Save On Must-Haves During The Thanksgiving Prep Sale". A notification at the bottom asks to "Enable desktop notifications for Gmail." with "OK", "No thanks", and "X" options.

2- immediately able to navigate emails with nav arrows

From	Subject	Date
Savory Spice	Get It by Thanksgiving: Free 2-Day Shipping Ends Soon! - Savory Spice · Arrives By Thanksgiving FREE 2-D...	5:30 AM
Savory Spice	FREE 2-Day Priority Shipping With \$49+ Purchase - Sage & Roasted Squash Risotto Creamy risotto, simmer...	Nov 18
Savory Spice	\$15 OFF Your Order - The Last Deal Of The Day! - Savory Spice Logo · FIND A STORE · LOYALTY CLUB · FI...	Nov 16
Savory Spice	Thanksgiving Deal of the Day! 25% OFF Salt & Pepper - Savory Spice Logo · FIND A STORE · LOYALTY CLUB · Th...	Nov 15
Savory Spice	Last Few Hours To Get \$15 OFF Before Thanksgiving - Savory Spice Logo · FIND A STORE · LOYALTY CLUB · ...	Nov 16
Savory Spice	You've Earned A \$10 Loyalty Club Reward! - Savory Spice. LOYALTY CLUB · \$10 Reward · You Have A Rew...	Nov 3
Savory, Draft 2	Only Hours Left - Buy 2, Get 1 FREE Spice & Easy! - On 11/14/25 1:31 PM, Savory Spice wrote: Discover meals...	Nov 14
Savory Spice	Happy Birthday Month! Get Your Free Spice Blend - Savory Spice. LOYALTY CLUB · Don't miss your free s...	Nov 2
Savory Spice	Today's Deal: Buy 2, Get 1 FREE Spice & Easy - Savory Savings 70+ Spices Under \$7 Whether you're just startin...	Nov 14
Savory Spice 2	You're a Cardamom VIP! - Facebook. Instagram. Pinterest. YouTube. No longer want to receive these emails?...	Oct 5
Savory Spice	Buy 2, Get 1 FREE Holiday Essentials Ends Tomorrow! - Savory Spice Logo · FIND A STORE · LOYALTY CLUB · Bu...	Nov 9
Savory Spice	They're Here: This Season's Most Giftable Flavor Bundles - Savory Spice Logo · FIND A STORE · LOYALTY C...	Nov 11
Savory Spice	Saffron Salt Is Back for the Holidays! - Savory Spice Logo · FIND A STORE · LOYALTY CLUB · Saffron Salt i...	Nov 5
Savory Spice	Thanksgiving Deal of the Day! 20% OFF Baking Spices & Extracts - Savory Savings · Gourmet Hot Cocoa B...	Nov 12
Savory Spice	NEW! Honey Butter Seasoning - Perfectly sweet and savory with a touch of creamy butter	Nov 3
Savory Spice	Save On Must-Haves During The Thanksgiving Prep Sale - 100 points = \$10 reward. Login now. Free Shippi...	Nov 8

9b Thunderbird keyboard control after using global search bar

The screenshot shows the Thunderbird email client interface with search results for 'Savory'. The search bar at the top contains '1 (searched "Savory" in global search bar)'. The search results are displayed in a list format, with the first result being 'Saffron Salt Is Back for the Holidays!'. The interface includes a left sidebar with filters, a main content area with search results, and a right sidebar with a search filter dropdown. Red annotations with numbers 1 through 7 are overlaid on the interface to describe keyboard navigation steps.

1 - searched "Savory" in global search bar

2 - nav arrows take me to quick search instead of emails

3 - tabbing brings me here, each tab takes me through "People" and "Folder" but skips filters

4 - brings me to "show results"

5 - Toggle timeline

6 - Sort by R

7 - finally at emails - **Nav arrows scrolls page down, doesn't allow me to hilight each email; have to use tab, but unable to go back up if i need to - would have to tab all the way back though

Keyboard Control Observations

(compared to GMAIL)

- Tabbing navigation seems to “flow” better in Gmail (see **images 9a-9b**)
 - **Last updated: 11/19/25**
 - MacOS Tahoe 26.0 / Thunderbird App 143.0.1 || Firefox 145.0.2
 - Mac Air Built-in Keyboard

- Able to tab through MOST of editing options on Gmail with tab/ nav arrows (e.g. send, exit, etc.) - BUT still can't access text editor; maybe I am doing something wrong with this as well, need to research more
 - **Last updated: 11/15/25**
 - MacOS Tahoe 26.0 / Thunderbird App 143.0.1 || Firefox 145.0.2
 - Mac Air Built-in Keyboard

Keyboard Control Observations

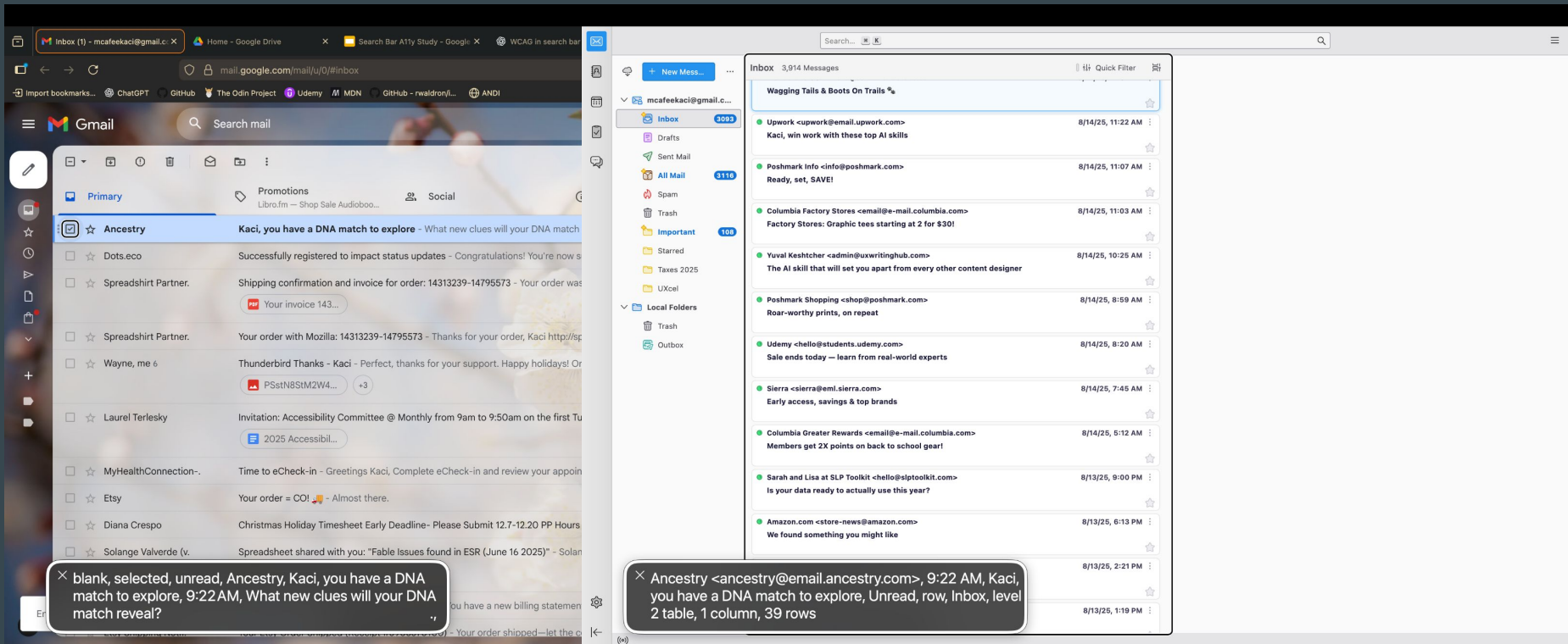
(compared to GMAIL)

- Able to tab through MOST of editing options on Gmail with tab/ nav arrows (e.g. send, exit, etc.) - BUT still can't access text editor; maybe I am doing something wrong with this as well, need to research more
 - **Last updated: 11/15/25**
 - MacOS Tahoe 26.0 / Thunderbird App 143.0.1 || Firefox 145.0.2
 - Mac Air Built-in Keyboard

Screen Reader

(Gmail)

10a VoiceOver: Gmail vs. Thunderbird



10b Test Email: Gmail

The screenshot displays the Gmail web interface in a browser window. The browser's address bar shows 'mail.google.com'. The Gmail header includes the logo, a search bar with 'in:sent', and a navigation menu. The main content area shows an email titled 'Test' from 'Kaci McAfee <mcafeekaci@gmail.com>' to 'mcafeekaci'. The email body contains the text 'Test test test test'. Below the email content are buttons for 'Reply', 'Forward', and a smiley face icon. A window title bar is overlaid on the email content, displaying the text: 'Safari, Test - mcafeekaci@gmail.com - Gmail, window Test test test test'. At the bottom of the screen, a notification banner reads: 'Enable desktop notifications for Gmail. OK No thanks X'.

10c Email Selection: Thunderbird

The screenshot displays the Thunderbird email client interface. On the left is a sidebar with folders: mcafeekaci@gmail.c... (Inbox: 3230, Drafts, Sent Mail, All Mail: 3255, Spam: 72, Trash: 171, Important: 108, Starred, Taxes 2025, UXcel), and Local Folders (Trash, Outbox). The main pane shows a list of 127 messages in the 'Sent Mail' folder. The list includes various emails such as 'unsubscribe', 'HR Payroll', 'taxdiy2rqngmtim63r4bq5kao8fo29k4h4e5k1-mcafeekaci@gmail.com@544893m.gitkraken.com', 'unsubscribe@unsubscribe.bebec.com', 'kgoates@ppld.org', 'list-unsubscribe+841954363_100604_1289212_9fjPe465W6@emarsys.net', 'AbeBooks Support', 'tours@wolffeducation.org', 'contact@emmasbookshop.com', 'Kaci McAfee', 'Chewy.com', and 'kacinmcafee@gmail.com'. The right pane shows a detailed view of an email from Kaci McAfee (mcafeekaci@gmail.com) to mcafeekaci@outlook.com, with the subject 'Test' and body text 'Test test test test'. A tooltip at the bottom right indicates 'table, 1 column, 36 rows Sent Mail, level 2 table, 1 column, 60 rows'.

Sender	Subject	Date
taxdvn70zqsq9pla0h3tp94z0gxcd6ceiw5u5x-mcafeekaci@gmail.com@544893m.gitkraken.com	unsubscribe	9/1/25, 10:12 AM
HR Payroll <hr.payroll@ssg-healthcare.com>	Payroll	8/22/25, 7:15 AM
taxdiy2rqngmtim63r4bq5kao8fo29k4h4e5k1-mcafeekaci@gmail.com@544893m.gitkraken.com	unsubscribe	8/24/25, 7:19 AM
unsubscribe@unsubscribe.bebec.com	beBee Alerts Unsubscribe - aHR0cHM6Ly91cy5iZWJlZS5jb2V0YVxlcncRzP2U9ZXIKcGRpSTZJbHBGZEHkldksQmXs...	8/20/25, 9:17 AM
kgoates@ppld.org	Website Accessibility Volunteer	8/20/25, 8:55 AM
list-unsubscribe+841954363_100604_1289212_9fjPe465W6@emarsys.net	unsubscribe	8/5/25, 10:20 PM
AbeBooks Support <info+500at0000ESq29AAD@support.abebooks.com>	Re: AbeBooks Case #43109981 Correspondence	7/24/25, 1:03 PM
tours@wolffeducation.org	Free Website Accessibility Audit	7/21/25, 10:45 AM
contact@emmasbookshop.com	Free Website Accessibility Audit	7/21/25, 10:42 AM
Kaci McAfee <mcafeekaci@gmail.com>	Google	7/19/25, 8:43 AM
Chewy.com <service@chewy.com>	Re: Thanks for Donating!	7/18/25, 10:40 AM
kacinmcafee@gmail.com <kacinmcafee@gmail.com>	columbia1_label_1z309A259028357649	7/16/25, 5:57 PM

Screen Reader Observations

(compared to GMAIL)

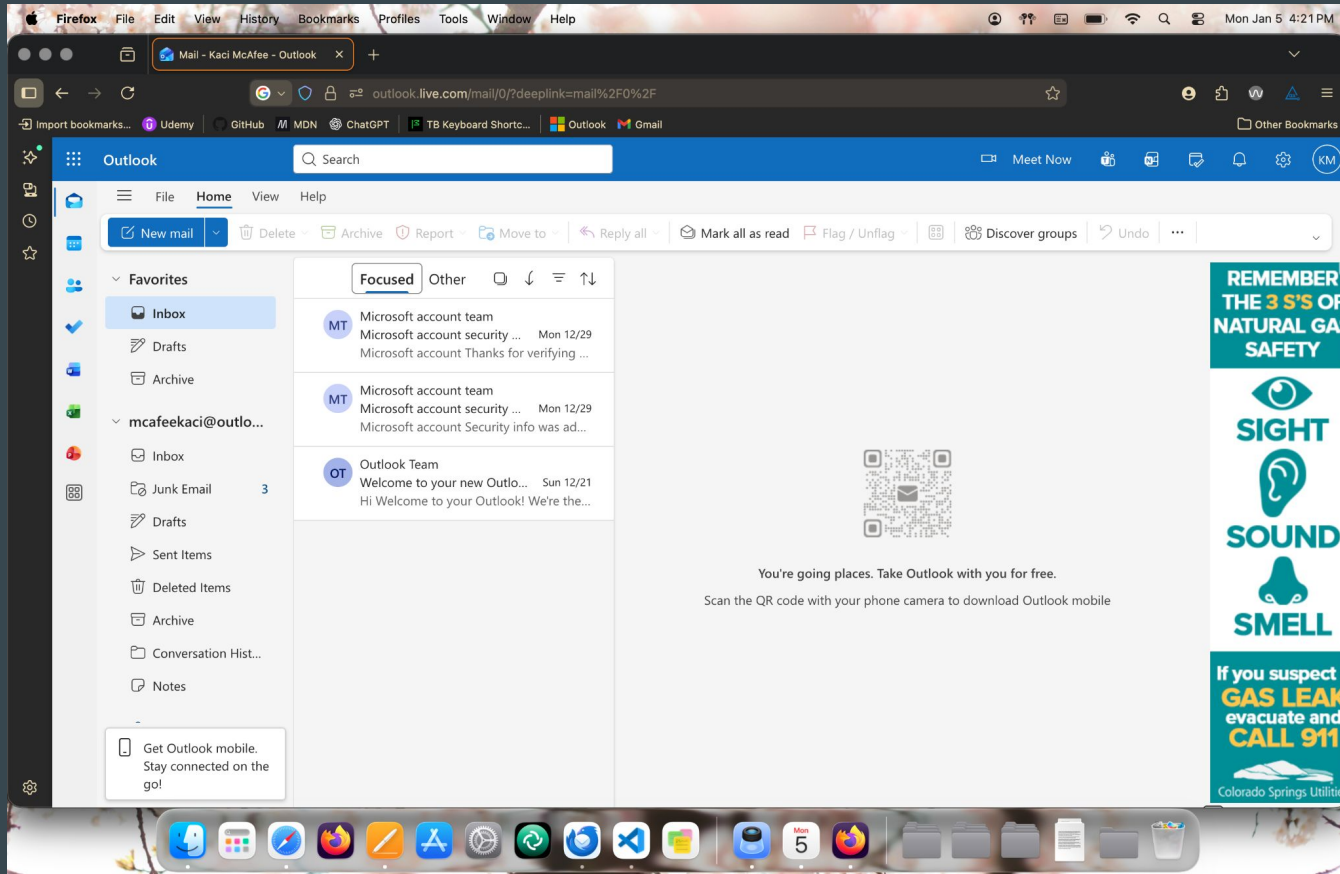
- Gmail reads more naturally than TB (see **image 10a**) – TB read this as “Ancestry - Lesser than - ancestry@email.ancestry.com - Greater than - ...”
 - **Last updated: 1/5/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Safari 26.2
 - VoiceOver
- Have to select each word individually in the “to” and “from” section to have it read to me, but able to select the message body itself and it reads the whole message at once (see **image 10b**)
 - **Last updated: 1/5/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Safari 26.2
 - VoiceOver
- Strange verbiage in TB, (e.g. “row, inbox, table/column/rows” etc...) (see **image 10c**)
 - **Last updated: 1/5/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Safari 26.2
 - VoiceOver

Comparing Thunderbird to Outlook

Navigational Focus

(Outlook)

11a Outlook highlighted states of interactivity (on “focused”)



11b Outlook Global Search- highlights keyword

The screenshot shows a web browser window displaying the Outlook interface. The browser's address bar shows the URL `outlook.live.com/mail/0/fd/AQqkADAwATM3ZmYBLWE4YzQlNDU3YyOwMAITMDAKABAahJHWuGh2EiAG0AgI`. The Outlook interface includes a navigation pane on the left with folders like 'Inbox', 'Drafts', and 'Archive'. The main content area shows search results for the keyword 'Outlook'. The top result is a welcome message from the 'Outlook Team' with the subject 'Welcome to your new Outlook...' and the body text 'Hi Welcome to your Outlook...'. The message is highlighted in blue. Below the search results, there is a welcome message from Microsoft: 'Welcome to your new Outlook.com account'. The message content includes: 'Hi', 'Welcome to your Outlook! We're the email service designed to help you conquer your day. Connect, organize, and get things done for free across your devices.', and a QR code with the text 'Get the free Outlook mobile app'. The QR code is a square with a blue 'O' in the center. The text 'Get the free Outlook mobile app' is in bold. Below it, it says 'The Outlook apps for iOS and Android are free. They make using your various email accounts and calendars simple and consistent!'. On the right side of the screen, there is a vertical advertisement for 'WICKED' featuring a landscape with a yellow path and a purple sky, with the text 'A little magic. A major upgrade.' and 'xfinity mobile' at the bottom.

11c Thunderbird Global Search- does NOT highlight keyword

The screenshot shows the Thunderbird Global Search interface. At the top, there are search bars for the entire account and for the current tab. The current tab is titled 'spice' and contains a search bar with the text 'spice'. Below the search bar, the results are displayed in a list format. The results are for the keyword 'spice' and are sorted by relevance. The results are as follows:

From	To	Date
Amazon.com		1
Etsy		1
Fable		2
Poshmark Info		2
Poshmark Shopping		4
Savory Spice (savory@savorys...)		84
Savory Spice (savory@hello.sa...)		2
Verve Coffee Roasters		4

Results for: spice [Show results as list](#)
10 of 103 [Toggle timeline](#) **Sort by Relevance**

The Next Era of Savory Spice Has Arrived **Savory Spice**
to:Kaci McAfee 10/31/25

[Free Shipping on Orders Over \$49] (https://www.savoryspiceshop.com)
[Savory Spice] (https://www.savoryspiceshop.com/)
[FIND A STORE] (https://www.savoryspiceshop.com/pages/locations)...

Buy 2, Get 1 FREE on Flavors That Will Steal the Show **Savory Spice**
to:Kaci McAfee 11/7/25

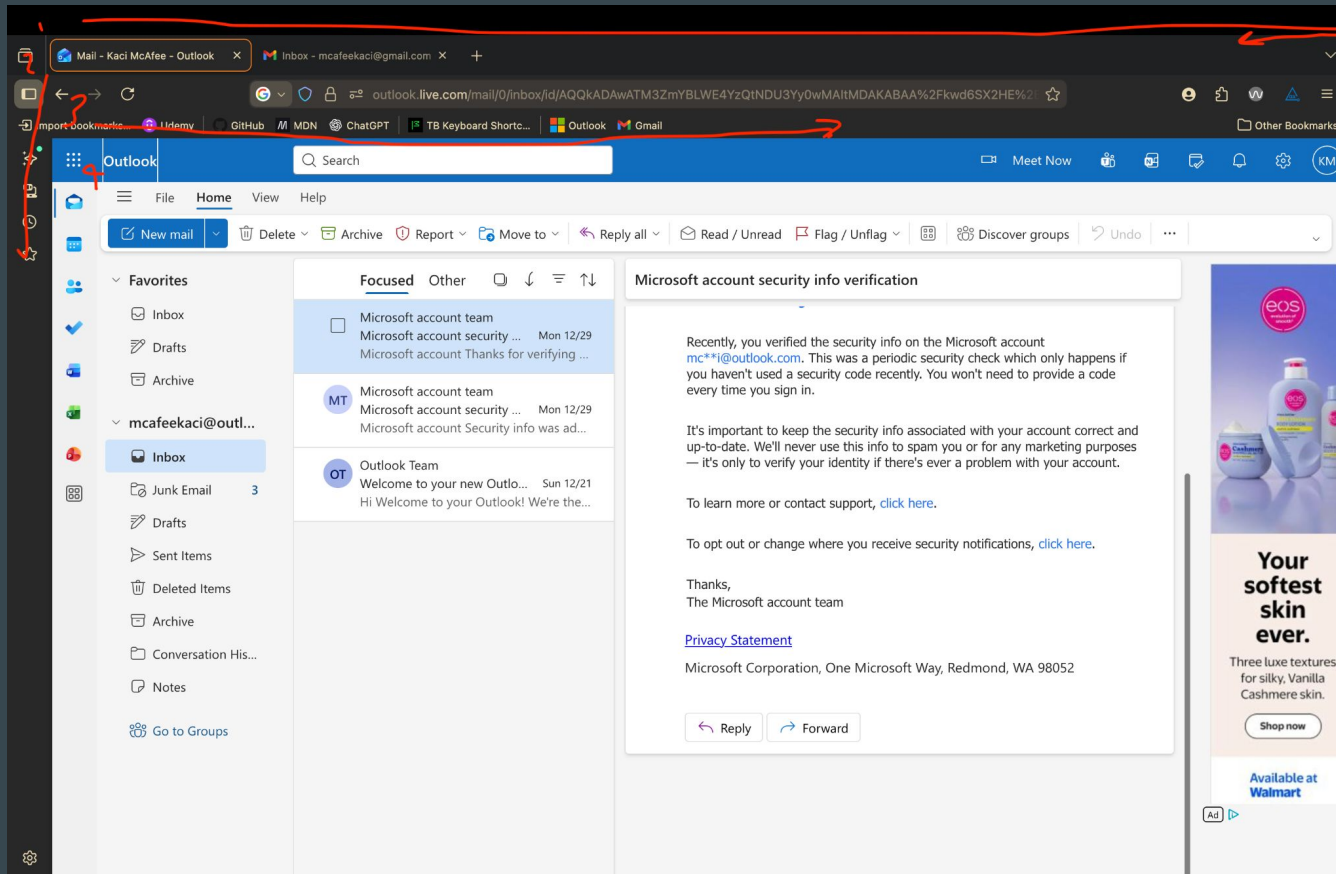
[Free Shipping on Orders Over \$49] (https://www.savoryspiceshop.com)
[Savory Spice] (https://www.savoryspiceshop.com/)
[FIND A STORE] (https://www.savoryspiceshop.com/pages/locations)...

10th Day: Buy One, Gift One on Our Founders' Favorite Flavors **Savory Spice**
to:Kaci McAfee 12/13/25

[Free Shipping on Orders Over \$49] (https://www.savoryspiceshop.com)
[Savory Spice] (https://www.savoryspiceshop.com/)
[FIND A STORE] (https://www.savoryspiceshop.com/pages/locations)...

Starts Now: Save Up to 20% During the Big Fall Baking Sale **Savory Spice**
to:Kaci McAfee 10/24/25

11d Navigational Flow Outlook requires excessive tabbing to access email content



Navigational Focus Observations

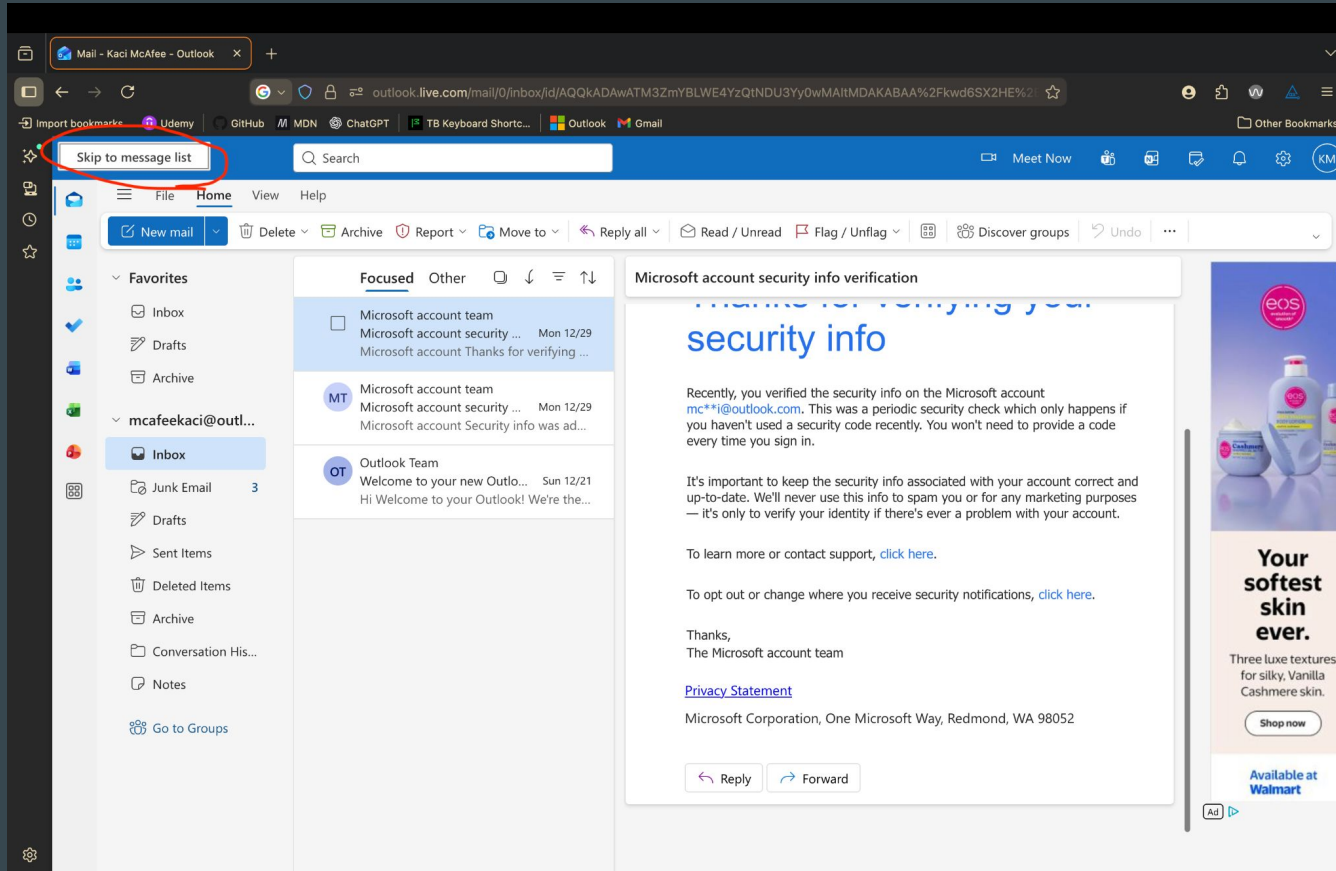
(compared to OUTLOOK)

- Similar to Gmail, I had difficulty seeing highlighted states of interactivity; additionally, they were inconsistent- some had a grey shadow with black border, others had white border that blended with rest of UI
 - **Last updated: 1/5/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Safari 26.2
 - Mac Air Built-In Keyboard
- Outlook does a better job of highlighting search results (see **images 11b for Outlook and 11c for TB**)
 - **Last updated: 1/5/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Safari 26.2
 - Mac Air Built-In Keyboard

Keyboard Control

(Outlook)

12a Outlook offers a “skip to” option when activating keyboard control



The screenshot displays the Outlook web interface in a browser window. The address bar shows the URL: `outlook.live.com/mail/0/inbox/id/AQQkADAwATM3ZmYBLWF4YzQtNDU3Yy0wMAItMDAKABAA%2Fkwd6SX2HE%2F`. The top navigation bar includes a search box and a button labeled "Skip to message list", which is circled in red. Below the navigation bar, the interface is divided into three main sections: a left sidebar with navigation options like "Inbox", "Drafts", and "Archive"; a central "Focused" view showing a list of emails from "Microsoft account team" and "Outlook Team"; and a right-hand pane displaying a "Microsoft account security info verification" message. The message content includes a verification notice, a link to "click here" for support, and a "Privacy Statement" link. An advertisement for EOS skincare is visible on the far right.

Keyboard Control Observations

(compared to OUTLOOK)

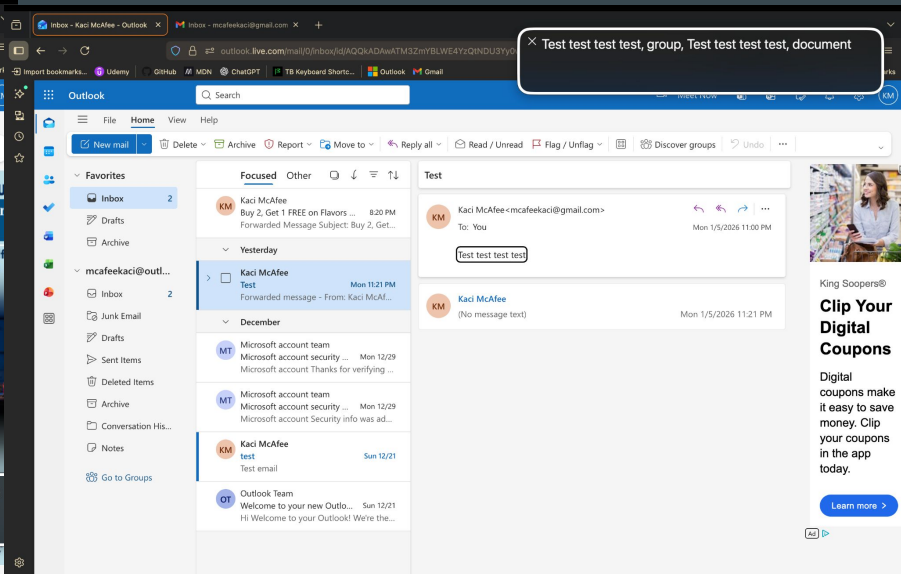
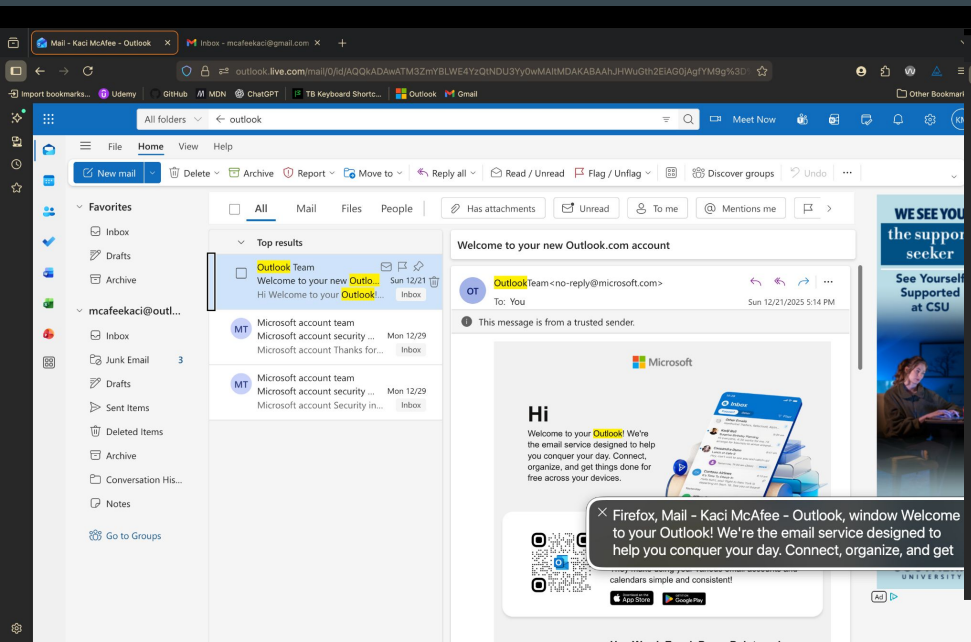
- Once on Outlook emails, I am immediately able to use nav arrows to select emails (in TB you select emails using Tab, which is a problem if you want to go back “up” to an email – you have to tab all the way through to return)
 - **Last updated: 1/5/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || 145.0.2
 - Mac Air Built-In Keyboard
- Outlook does not automatically begin in the top left of website - I had to tab through all of my browser options several times to finally get to Outlook and attempt to view emails (see **image 11d**)
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard
- After searching on Outlook I am immediately brought to emails, able to use nav arrows and enter to go between emails; in TB, using nav arrows scrolls the page, tabbing is only way to interact with emails
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard

Screen Reader *(Outlook)*

13a VO on Outlook - does not read selected text if in image

The screenshot shows the Outlook.com web interface. The browser address bar displays the URL: outlook.live.com/mail/0/id/AQQKADAwATM3ZmYBLWE4YzQ1NDU3Yy0wMAhMDAKABAahJHwGth2EIAG0JAgfYM9g%3D. The interface includes a navigation bar with 'File', 'Home', 'View', and 'Help' tabs. Below this is a toolbar with options like 'New mail', 'Delete', 'Archive', 'Report', 'Move', 'Reply', 'Read / Unread', 'Flag / Unflag', 'Discover groups', and 'Undo'. The left sidebar shows 'Favorites' (Inbox, Drafts, Archive) and 'mcafeekaci@out...' (Inbox, Junk Email, Drafts, Sent Items, Deleted Items, Archive, Conversation His..., Notes, Go to Groups). The main content area displays a 'Welcome to your new Outlook.com account' message. A red circle highlights a text element in the message: 'Use Word, Excel, PowerPoint, and OneDrive for free on the web'. Below this, there are sections for 'Write better emails' and 'Personalize Outlook for your style'. A dark grey error box at the bottom right contains the text: 'X You are currently on a text element.' The right sidebar features an advertisement for Adobe Creative Cloud Pro with the text 'Express yourself your way.' and a 'Try now' button.

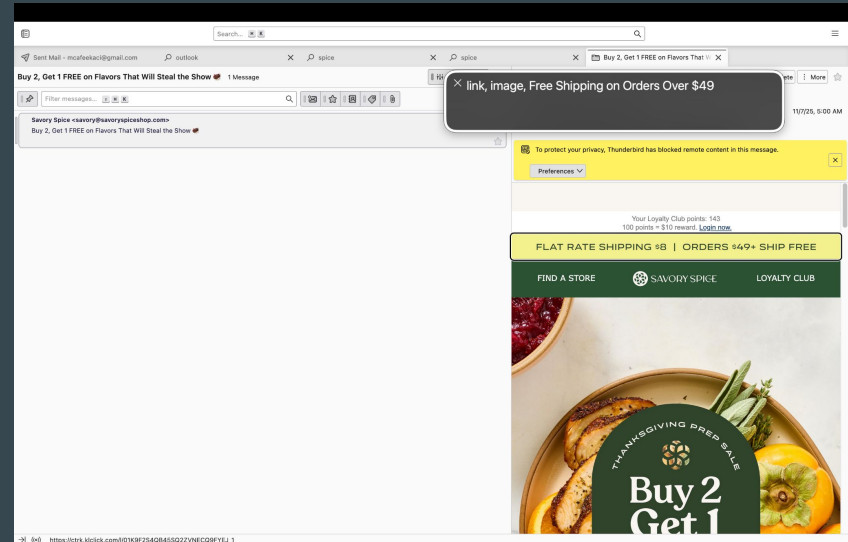
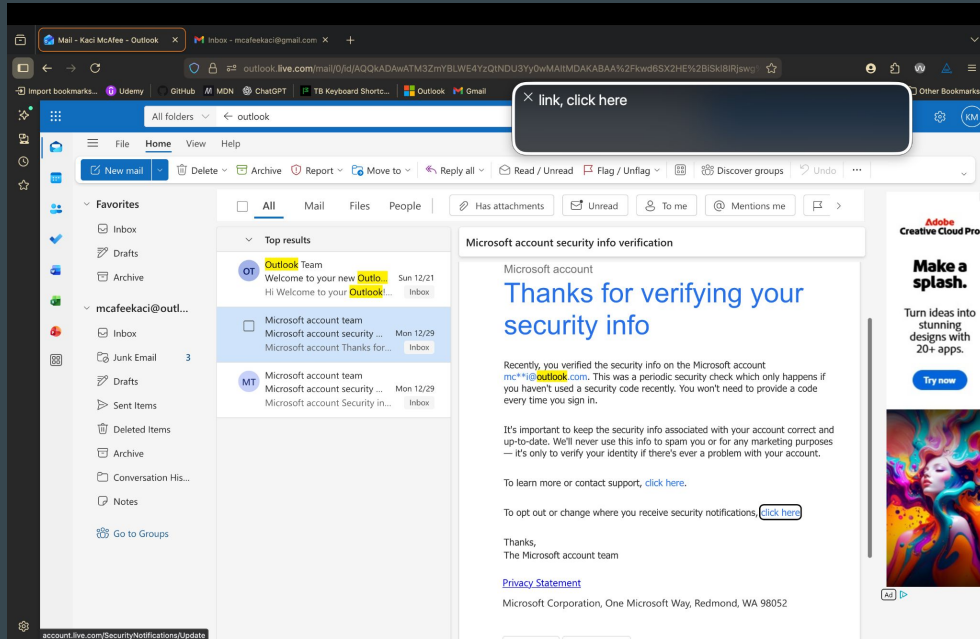
13b VO on Outlook - correctly reads message title & content (if not presented in image format)



13c VO after Search - more meaningful text

The screenshot displays the Outlook web interface. The search bar at the top contains the text "outlook". A callout box points to the search results, containing the text: "outlook, Insertion at end of text., Search for email, meetings, files and more., edit text, expanded, search". The email list shows a message from "Outlook Team" with the subject "Welcome to your new Outlook!". The main content area shows the email body with the text: "Hi Welcome to your Outlook! We're the email service designed to help you conquer your day. Connect, organize, and get things done for free across your devices." Below the main text is a promotional banner for the Outlook mobile app, featuring a QR code and the text: "Get the free Outlook mobile app. The Outlook apps for iOS and Android are free. They make using your various email accounts and calendars simple and consistent!" The interface also includes a left sidebar with navigation options like "Inbox", "Drafts", and "Archive", and a right sidebar with a "WE SEE YOU" banner for Columbia Southern University.

13d VO and links



13e Outlook properly tells me To/From

The screenshot shows the Outlook web interface in a browser window. The address bar shows the URL: `outlook.live.com/mail/0/inbox/id/AQQKADAwATM3ZmYBLWE4YzQlNDU3YzQwMAIIMDAKABAhnZoh7kobKS1nu%2FKo%2`. The Outlook navigation pane on the left shows the 'Inbox' folder selected, with 4 items. The main content area displays an email thread. The top email is from 'Kaci McAfee' (mcafeekaci@gmail.com) with the subject 'Buy 2, Get 1 FREE on Flavors That Will Steal the Show' and a timestamp of 8:20 PM. Below it is a forwarded message from 'Kaci McAfee' (KM) with the subject 'Test' and a timestamp of 11:21 PM. The email body shows a forwarded message with the following details: Subject: Buy 2, Get 1 FREE on Flavors That Will Steal the Show; Date: Fri, 07 Nov 2025 12:00:52 +0000 (UTC); From: Savory Spice <savoryspice@gmail.com>. A tooltip is visible over the 'To: You' field, displaying the text: 'Email message, group, To: mcafeekaci@outlook.com, group'. The right sidebar shows a 'Clip Your Digital' advertisement for King Soopers, with the text 'for less when you shop today. Save at King Soopers.' and a 'Learn more >' button.

13f Outlook reads out “table, column, etc..”

The screenshot shows the Outlook web interface. The browser address bar displays the URL: `outlook.live.com/mail/0/inbox/fd/AQKkADAwATM3ZmYBLWE4YzQINDU3Yy0wMAItMDAKABAhnZoh7kobkS1nu%2FKo%2`. The Outlook navigation bar includes a search box and icons for 'Meet Now', 'Share', 'Print', 'Refresh', 'Settings', and 'KM'. The main content area shows an email from 'Kaci McAfee' with the subject 'Buy 2, Get 1 FREE on Flavors That Will Steal the Show'. The email body contains the following text:

Subject: Buy 2, Get 1 FREE on Flavors That Will Steal the Show 🍷
Date: Fri, 07 Nov 2025 12:00:52 +0000 (UTC)
From: Savory Spice <savory@savoryspiceshop.com>
To: kaci mcafee <mcafeekaci@gmail.com>

A dark tooltip box is overlaid on the email content, displaying the text: `link, <savory@savoryspiceshop.com>, table, 2 columns, 4 rows`. Below the email, a promotional banner for 'Savory Spice' is visible, featuring a green background with white text: 'FLAT RATE SHIPPING \$8 | ORDERS \$49+ SHIP FREE', 'FIND A STORE', 'SAVORY SPICE', and 'LOYALTY CLUB'. The banner also includes a 'Buy 2' offer and a 'THANKSGIVING PREP SALE' logo. To the right of the banner is a 'King Soopers®' advertisement with the text: 'Clip Your Digital Coupons', 'Find your fresh favorites for less when you shop today. Save at King Soopers®.', and a 'Learn more >' button.

Screen Reader Observations

(compared to OUTLOOK)

- Outlook also does not read emails if the text is inside an image (see **image 13a**)
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard
- Outlook correctly reads message title in VO (see **image 13b**)
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard
- Outlook has more meaningful feedback when using search bar (see **image 13c**)
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard
- Outlook will read what a link says, but not where it takes you - I am unable to get VO to read the message itself, so semantics of actual message is lost. TB does this as well on some links (e.g. “subscribe” or “click here”, but other text is more meaningful) (see **image 13d**)
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard

Screen Reader Observations

(compared to OUTLOOK)

- Outlook properly announces to/from (see **image 13e**)
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard
- Outlook will also read out things like “tables, rows”, etc... like TB (see **image 13f**)
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard
- Outlook has more meaningful feedback when using search bar (see **image 13c**)
 - **Last updated: 1/6/26**
 - MacOS Tahoe 26.2 / Thunderbird App 146.0.1 || Firefox 146.0.1
 - Mac Air Built-In Keyboard