

Voluntary Product Accessibility Template (VPAT) for CK-12 FlexBooks 2.0

Name of Product/Version: CK-12 FlexBooks 2.0

Product Description: Math and Science learning materials

Date of Report: 07/31/2024

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Notes: This VPAT covers the Conventional Math FlexBooks® 2.0 and Science FlexBooks® 2.0.

Evaluation Methods Used

Accessibility issues were identified using digital tools including axe DevTools and human testing. All identified issues were addressed, including creating ALT-text for images, updating CSS descriptions for dozens of artifacts on the pages to ensure appropriate contrast, and reviewing YouTube closed captions.

Applicable Standards/Guidelines

Web Content Accessibility Guidelines 2.0

Web Content Accessibility Guidelines 2.1

Revised Section 508 standards

EN 301 549 Accessibility requirements for ICT products and services - V3.1.1

EN 301 549 Accessibility requirements for ICT products and services - V3.2.1

Conformance Levels

The terms used in the Conformance Level information are defined as:

Supports: The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.

Partially Supports: Some functionality of the product does not meet the criterion.

Does Not Support: The majority of product functionality does not meet the criterion.

Not Applicable: The criterion is not applicable to the product.

Not Evaluated: The product has not been evaluated against the criterion.

Detailed Criteria and Conformance for ck12.org

1. Perceivable

1.1 Text Alternatives

1.1.1 Non-text Content

Conformance Level: **Supports**

Remarks and Explanations: ALT-text has been created for all images in the CK-12 Conventional Math FlexBooks 2.0 and CK-12 Science FlexBooks 2.0, ensuring that non-text content is accessible to screen reader users.

1.2 Time-based Media

1.2.1 Audio-only and Video-only (Prerecorded)

Conformance Level: **Not Applicable**

Remarks and Explanations: No audio-only or video-only content is used.

1.2.2 Captions (Prerecorded)

Conformance Level: **Supports**

Remarks and Explanations: Videos hosted on YouTube have closed captioning available. Captions have been reviewed for accuracy to ensure they meet accessibility standards.

1.2.3 Audio Description or Media Alternative (Prerecorded)

Conformance Level: **Not Applicable**

Remarks and Explanations: No audio descriptions are required as the content is fully accessible through other means.

1.2.4 Captions (Live)

Conformance Level: **Supports**

Remarks and Explanations: Live captions are provided for live content, and audio descriptions are available for prerecorded content.

1.2.5 Audio Description (Prerecorded)

Conformance Level: **Supports**

Remarks and Explanations: Audio descriptions are available for prerecorded content.

1.3 Adaptable

1.3.1 Info and Relationships

Conformance Level: **Supports**

Remarks and Explanations: Information and relationships conveyed through presentation can be programmatically determined or are available in text.

1.3.2 Meaningful Sequence

Conformance Level: **Supports**

Remarks and Explanations: Content is presented in a meaningful sequence.

1.3.3 Sensory Characteristics

Conformance Level: **Supports**

Remarks and Explanations: Instructions do not rely solely on sensory characteristics.

1.4 Distinguishable

1.4.1 Use of Color

Conformance Level: **Supports**

Remarks and Explanations: Color is not used as the sole method of conveying information.

1.4.2 Audio Control

Conformance Level: **Not Applicable**

Remarks and Explanations: No audio content that plays automatically.

1.4.3 Contrast (Minimum)

Conformance Level: **Supports**

Remarks and Explanations: All previously identified color contrast issues have been addressed. Buttons, descriptive text, lesson titles, and other elements now meet the minimum contrast requirements as verified using appropriate testing tools.

1.4.4 Resize Text

Conformance Level: **Supports**

Remarks and Explanations: Text is fully resizable without loss of content or functionality.

1.4.5 Images of Text

Conformance Level: **Supports**

Remarks and Explanations: Text is used in place of images where possible.

1.4.10 Reflow

Conformance Level: **Supports**

Remarks and Explanations: Reflow (responsive formatting) is correct.

1.4.11 Non-text Contrast

Conformance Level: **Supports**

Remarks and Explanations: Non-text contrast issues have been addressed using axe DevTools.

1.4.12 Text Spacing

Conformance Level: **Supports**

Remarks and Explanations: Text spacing can be adjusted without loss of content or functionality.

1.4.13 Content on Hover or Focus

Conformance Level: **Supports**

Remarks and Explanations: Additional content that appears on hover or focus is accessible and does not obscure other content.

2. Operable

2.1 Keyboard Accessible

2.1.1 Keyboard

Conformance Level: **Supports**

Remarks and Explanations: All functionality is operable through a keyboard interface.

2.1.2 No Keyboard Trap

Conformance Level: **Supports**

Remarks and Explanations: No keyboard traps present.

2.1.4 Character Key Shortcuts

Conformance Level: **Not Applicable**

Remarks and Explanations: No character key shortcuts are used.

2.2 Enough Time

2.2.1 Timing Adjustable

Conformance Level: **Not Applicable**

Remarks and Explanations: No timed content is used.

2.2.2 Pause, Stop, Hide

Conformance Level: **Not Applicable**

Remarks and Explanations: No moving, blinking, or scrolling content that requires pause, stop, or hide functionality.

2.3 Seizures and Physical Reactions

2.3.1 Three Flashes or Below Threshold

Conformance Level: **Supports**

Remarks and Explanations: No content flashes more than three times in any one second period.

2.3.2 Three Flashes

Conformance Level: **Not Applicable**

Remarks and Explanations: No content flashes more than three times in any one second period.

2.4 Navigable

2.4.1 Bypass Blocks

Conformance Level: **Supports**

Remarks and Explanations: Mechanisms are provided to bypass blocks of content that are repeated on multiple pages.

2.4.2 Page Titled

Conformance Level: **Supports**

Remarks and Explanations: Web pages have titles that describe the topic or purpose.

2.4.3 Focus Order

Conformance Level: **Supports**

Remarks and Explanations: Keyboard navigation provides enhanced functionality, allowing access to additional navigational elements that are not visible to mouse users. These hidden but functional navigation buttons are accessible via tab-navigation, providing efficient movement through the content for keyboard users.

2.4.4 Link Purpose (In Context)

Conformance Level: **Supports**

Remarks and Explanations: The purpose of each link can be determined from the link text alone or from the link text together with its context.

2.4.5 Multiple Ways

Conformance Level: **Supports**

Remarks and Explanations: Multiple ways are available to locate a web page within a set of web pages.

2.4.6 Headings and Labels

Conformance Level: **Supports**

Remarks and Explanations: Descriptive section headings are present throughout the specified content (Conventional Math FlexBooks 2.0 and Science FlexBooks 2.0).

2.4.7 Focus Visible

Conformance Level: **Supports**

Remarks and Explanations: Focus indicators are visible and logical.

2.4.8 Location

Conformance Level: **Not Applicable**

Remarks and Explanations: No requirement for this criterion.

2.4.9 Link Purpose (Link Only)

Conformance Level: **Not Applicable**

Remarks and Explanations: No requirement for this criterion.

2.4.10 Section Headings

Conformance Level: **Supports**

Remarks and Explanations: Section headings are used to organize content.

3. Understandable

3.1 Readable

3.1.1 Language of Page

Conformance Level: **Supports**

Remarks and Explanations: The default human language of each web page can be programmatically determined.

3.1.2 Language of Parts

Conformance Level: **Supports**

Remarks and Explanations: The language of page parts is programmatically determinable.

3.2 Predictable

3.2.1 On Focus

Conformance Level: **Supports**

Remarks and Explanations: When any component receives focus, it does not initiate a change of context.

3.2.2 On Input

Conformance Level: **Supports**

Remarks and Explanations: Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component.

3.2.3 Consistent Navigation

Conformance Level: **Supports**

Remarks and Explanations: Navigational mechanisms that are repeated on multiple web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user.

3.2.4 Consistent Identification

Conformance Level: **Supports**

Remarks and Explanations: Components that have the same functionality within a set of web pages are identified consistently.

3.2.5 Change on Request

Conformance Level: **Not Applicable**

Remarks and Explanations: No requirement for this criterion.

3.3 Input Assistance

3.3.1 Error Identification

Conformance Level: **Supports**

Remarks and Explanations: If an input error is detected, it is identified and described to the user in text.

3.3.2 Labels or Instructions

Conformance Level: **Supports**

Remarks and Explanations: Labels or instructions are provided when content requires user input.

3.3.3 Error Suggestion

Conformance Level: **Supports**

Remarks and Explanations: If an input error is detected and suggestions for correction are known, then the suggestions are provided to the user.

3.3.4 Error Prevention (Legal, Financial, Data)

Conformance Level: **Supports**

Remarks and Explanations: For web pages that require the user to submit information, the data entered by the user is checked for input errors and the user is provided an opportunity to correct them.

4. Robust

4.1 Compatible

4.1.1 Parsing

Conformance Level: **Supports**

Remarks and Explanations: In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique.

4.1.2 Name, Role, Value

Conformance Level: **Supports**

Remarks and Explanations: All user interface components have proper name, role, and value attributes, ensuring compatibility with assistive technologies.

Specific Content Entries

General Notes:

Content Reviewed: CK-12 Conventional Math FlexBooks 2.0 and CK-12 Science FlexBooks 2.0

Evaluation Methods: Accessibility issues were identified using digital tools including axe DevTools and human testing.

Improvements Made: All identified issues were addressed, including:

Creating ALT-text for images.

Updating CSS descriptions for dozens of artifacts on the pages to ensure appropriate contrast.

Reviewing and ensuring the accuracy of YouTube closed captions.

1.4.3 Contrast (Minimum)

Conformance Level: **Supports**

Remarks and Explanations: Color contrast issues identified in the CK-12 Conventional Math FlexBooks 2.0 and CK-12 Science FlexBooks 2.0 were resolved. Buttons, descriptive text, lesson titles, and other elements now meet the minimum contrast requirements as verified using axe DevTools and human testing.

1.4.6 Contrast (Enhanced)

Conformance Level: **Supports**

Remarks and Explanations: Enhanced color contrast requirements have been met for key elements in the CK-12 Conventional Math FlexBooks 2.0 and CK-12 Science FlexBooks 2.0, ensuring improved readability for users with low vision.

1.1.1 Non-text Content

Conformance Level: **Supports**

Remarks and Explanations: ALT-text has been created for all images in the CK-12 Conventional Math FlexBooks 2.0 and CK-12 Science FlexBooks 2.0, ensuring that non-text content is accessible to screen reader users.

1.2.2 Captions (Prerecorded)

Conformance Level: **Supports**

Remarks and Explanations: Videos hosted on YouTube have closed captioning available. Captions have been reviewed for accuracy to ensure they meet accessibility standards.

2.4.3 Focus Order

Conformance Level: **Supports**

Remarks and Explanations: Keyboard navigation provides enhanced functionality, allowing access to additional navigational elements that are not visible to mouse users. These hidden but functional navigation buttons are accessible via tab-navigation, providing efficient movement through the content for keyboard users.

Detailed Notes on Specific Tools/Features

FlexBook 2.0 - Insights

Conformance Level: **Partially Supports**

Remarks and Explanations: Some accessibility issues were identified and are being addressed. Ongoing efforts include improving screen reader compatibility and ensuring all interactive elements are fully accessible.

Quiz, Inline Quiz, and Summative Quiz Modules

Conformance Level: **Partially Supports**

Remarks and Explanations: Identified issues include ensuring proper focus management and keyboard accessibility for all quiz elements. These issues are being actively addressed.

Conclusion

The CK-12 FlexBooks 2.0 platform meets AA conformance across all mentioned criteria for all primary content and features, demonstrating a strong commitment to accessibility. Specific tools and features have been reviewed and are being continuously improved to ensure full accessibility compliance.