

# Redesigning the Providence Children's Museum Website

## The Providence Children's Museum

<http://www.childrenmuseum.org/>

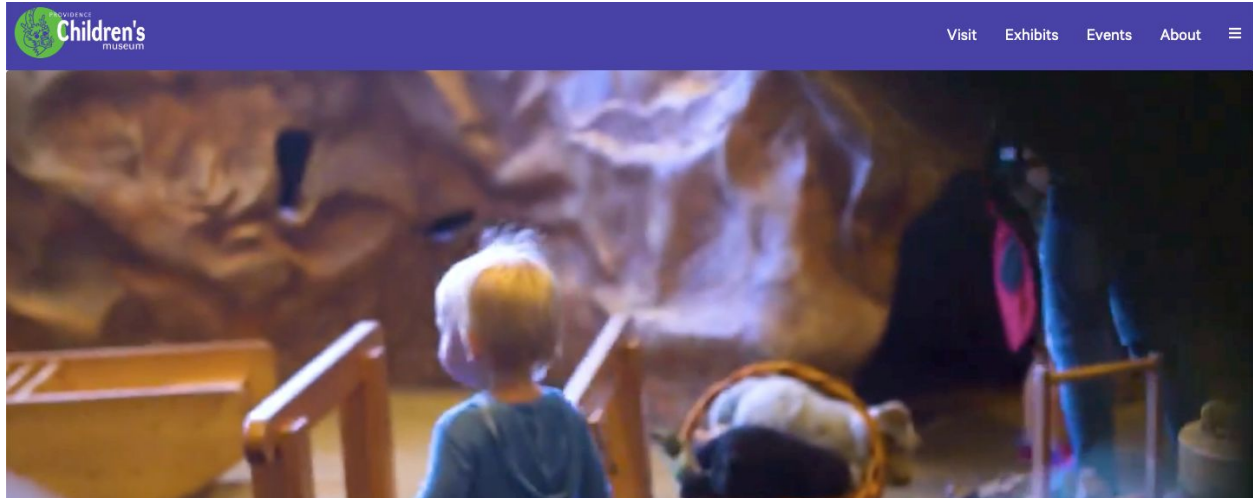


Original design

Founded in the 1970's, the [Providence Children's Museum](http://www.childrenmuseum.org/) originated in Pawtucket as the first and only children's museum in Rhode Island. Since relocating to Providence in 1997, the museum has attracted over 2.5 million visitors through its interactive exhibits and hands-on learning environments. Currently, its website provides information about visiting, current exhibits, how to support the museum, and more; however, the website's inconsistent and unorganized design makes it difficult to find pertinent information. Furthermore, the lack of responsiveness makes it difficult to use on other screen sizes.

Our goal is to redesign the homepage, focusing on improving its usability and aesthetic appearance. We started with finding problems with the current interface and making 6 low-fidelity wireframes. Then, we focused on the homepage and exhibits page, making high-fidelity screens followed by annotated mockups. Finally, we created the responsive homepage.

Additional screenshots of the original website can be found in `screenshots.pdf`.



Our redesign

## Usability Redesign

Currently, the original interface has many problems with inconsistency and disorganization that detract from the user experience. We organized these problems based on [usability.gov](https://usability.gov/)'s criteria: intuitive design, ease of learning, efficiency of use, and memorability. Then, we developed solutions to each problem for our redesigned interface, incorporating them into our low-fidelity wireframes in Balsamiq. Finally, we made a wireframe navigation flowchart.

### Usability Improvements

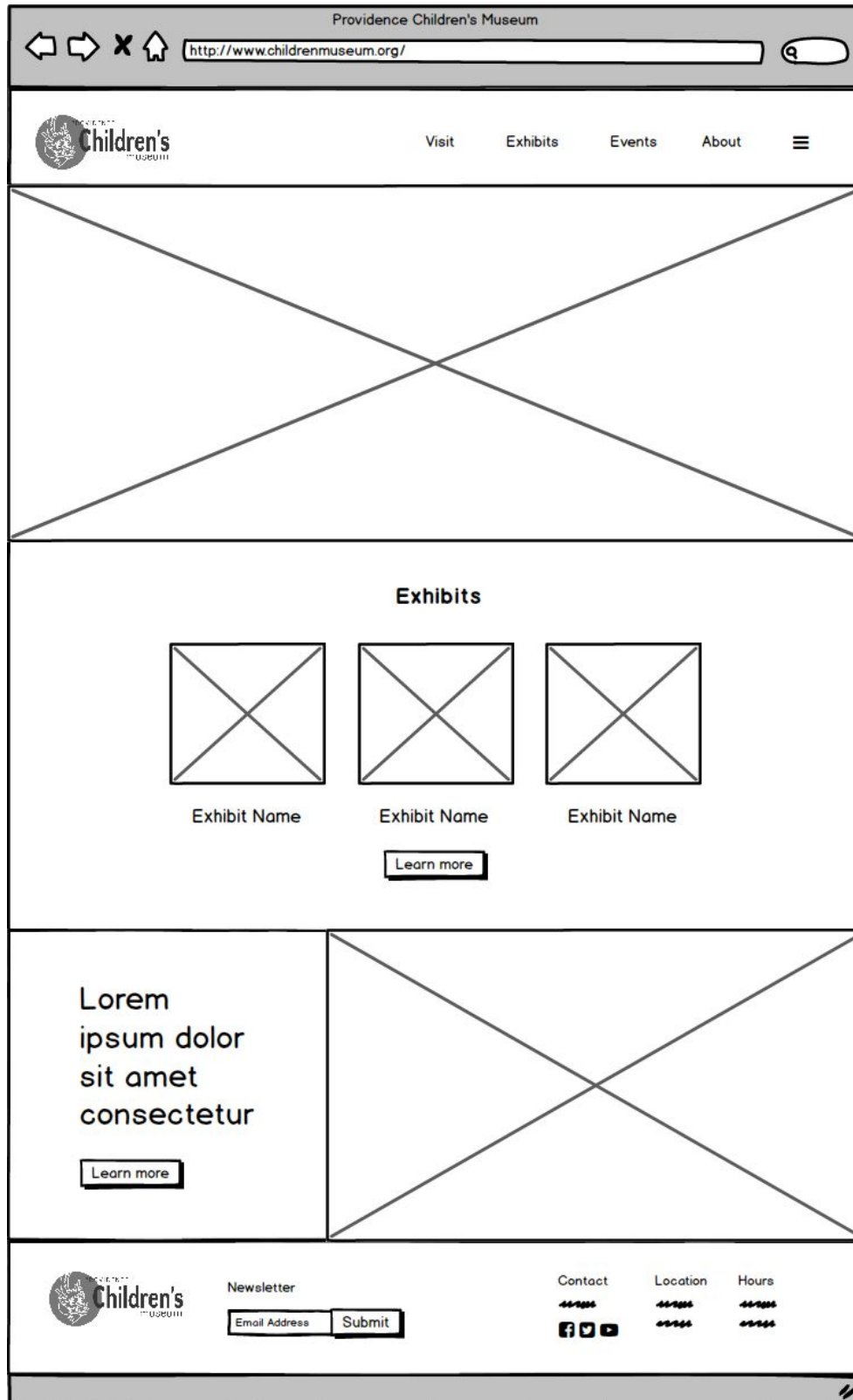
	Original Interface	Redesigned Interface
Intuitive Design	<ul style="list-style-type: none"> <li>• 11 item navigation bar is overly complex/hard to understand</li> <li>• Some navigation links lead to a blank (missing/error) page</li> <li>• It is unclear that links in navigation bar are categories and not actual web pages</li> <li>• Not obvious some links in navigation bar are external and take users away from original site</li> <li>• Uses flashing images as links to web pages - difficult for users</li> </ul>	<ul style="list-style-type: none"> <li>• Navigation bar at top reduced to 4 main items most relevant to users</li> <li>• Secondary navigation links located inside menu sidebar</li> <li>• Removed error pages and external links from navigation bar</li> <li>• Consolidated related information and pages to simplify overall navigation</li> <li>• On hover, an underline appears to show users the navigation links are clickable</li> <li>• Removed flashing images and</li> </ul>

	to revisit the page as image is constantly changing	added clear buttons so it would be obvious to the user what they're clicking on
Ease of Learning	<ul style="list-style-type: none"> <li>• Inconsistent page layouts make it hard for new users to accomplish basic tasks</li> <li>• Small buttons are challenging to see at first glance</li> </ul>	<ul style="list-style-type: none"> <li>• Uniform/consistent layout across site increases ease of use</li> <li>• Clear buttons with large text helps new users better navigate site</li> </ul>
Efficiency of Use	<ul style="list-style-type: none"> <li>• Pages contain large blocks of text - users must read slowly and may miss important information</li> <li>• Difficult to view and compare exhibits (each exhibit is in an individual link and users need to go back and forth between pages)</li> <li>• Related information is located on multiple different pages</li> </ul>	<ul style="list-style-type: none"> <li>• Small blocks of text deliver information quickly and efficiently</li> <li>• Added pictures and brief description of each exhibit to the Exhibits page to increase efficiency</li> <li>• Consolidated all related information in our redesign (e.g. new "Visit" page consolidates 2 original pages "Hours and Admission" and "Directions and Parking")</li> </ul>
Memorability	<ul style="list-style-type: none"> <li>• Information is disorganized and scattered--even for experienced users, navigation is difficult due to the sheer amount of content under each heading</li> <li>• Difficult to remember on which page the information you need is located</li> <li>• Difficult to remember the path taken to a specific page since there is no feedback as to which link was clicked in the navigation bar</li> </ul>	<ul style="list-style-type: none"> <li>• Each link in navigation bar takes users to a page they can navigate to - there, they can find the specific destination page they're searching for. This eliminates the confusion of having multiple dropdown options under each heading.</li> <li>• Line appears underneath the heading each user selected, helping them understand what they clicked on to navigate more efficiently in the future</li> </ul>

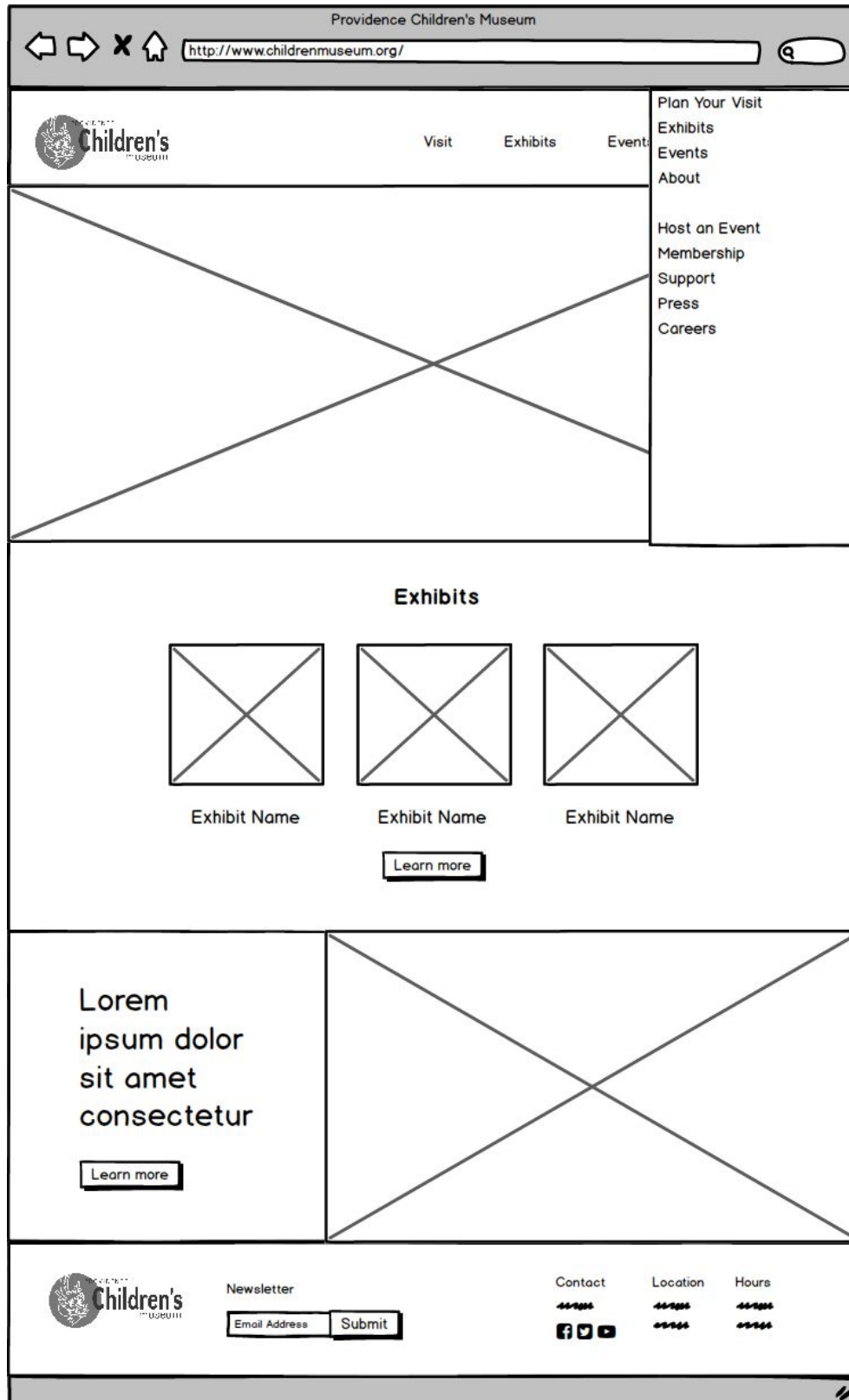
#### Wireframes (also in wireframes folder)

1. Homepage
2. Homepage with menu visible
3. Visit
4. Exhibits
5. About
6. Support
7. Careers

## Homepage




Homepage with menu visible



Visit

Providence Children's Museum

http://www.childrensmuseum.org/visit



VisitExhibitsEventsAbout

Visit the Museum

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Quick Tips

Museum Hours

Monday-Friday: 9am-5pm  
Saturday: 12pm-5pm  
Sunday: 12pm-4pm

Parking

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Admission

Members	\$12
Youth (3-17)	\$12
Students	\$16
Adults	\$20
Senior	\$16

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Directions

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Map

Parties


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Explore

Rent the Museum

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Learn More






Newsletter




Email Address

Submit




Contact



Location



Hours






## Exhibits

Providence Children's Museum

http://www.childrenmuseum.org/exhibits



VisitExhibitsEventsAbout

Our Exhibits

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New Exhibits




Exhibit 1

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Exhibit 2

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Exhibit 3

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Always on View




Exhibit 1

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Exhibit 2

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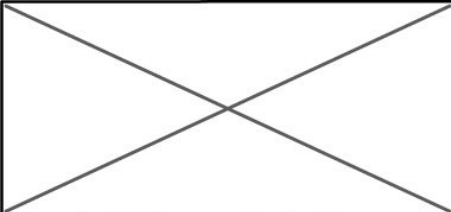


Exhibit 3

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Museum Of Art


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Calendar of Events

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October 2019

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28



Newsletter




Email Address




Submit




Contact

Location

Hours








## About

Providence Children's Museum

http://www.childrenmuseum.org/about



Visit

Exhibits

Events

About

Mission

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History

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Impact & Service

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Support the Museum

Learn more



Newsletter

Email Address

Submit

Contact

Location

Hours



## Support

Providence Children's Museum

http://www.childrenmuseum.org/support

Children's  
Museum

Visit

Exhibits

Events

About

Support the Museum

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Donate to the Museum

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Donate Now

Volunteer

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Fundraisers

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Leave a Legacy

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Our Careers

Get Involved

Children's  
Museum

Newsletter

Email Address

Submit





Contact

Location


Hours


## Careers

Providence Children's Museum



http://www.childrenmuseum.org/careers






Visit

Exhibits

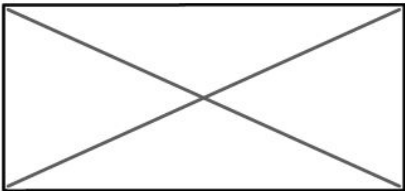
Events

About



Work With Us

Explore



Volunteer Opportunities

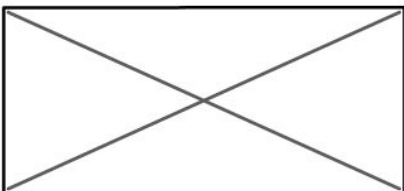
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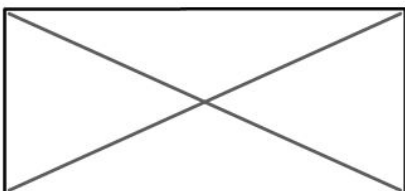
Get Involved

Internships

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Explore





Work-Study

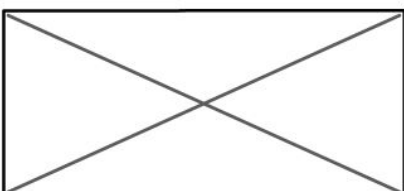
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Learn More

Americorps

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Explore








Newsletter



Email Address

Submit



Contact




Location

Hours

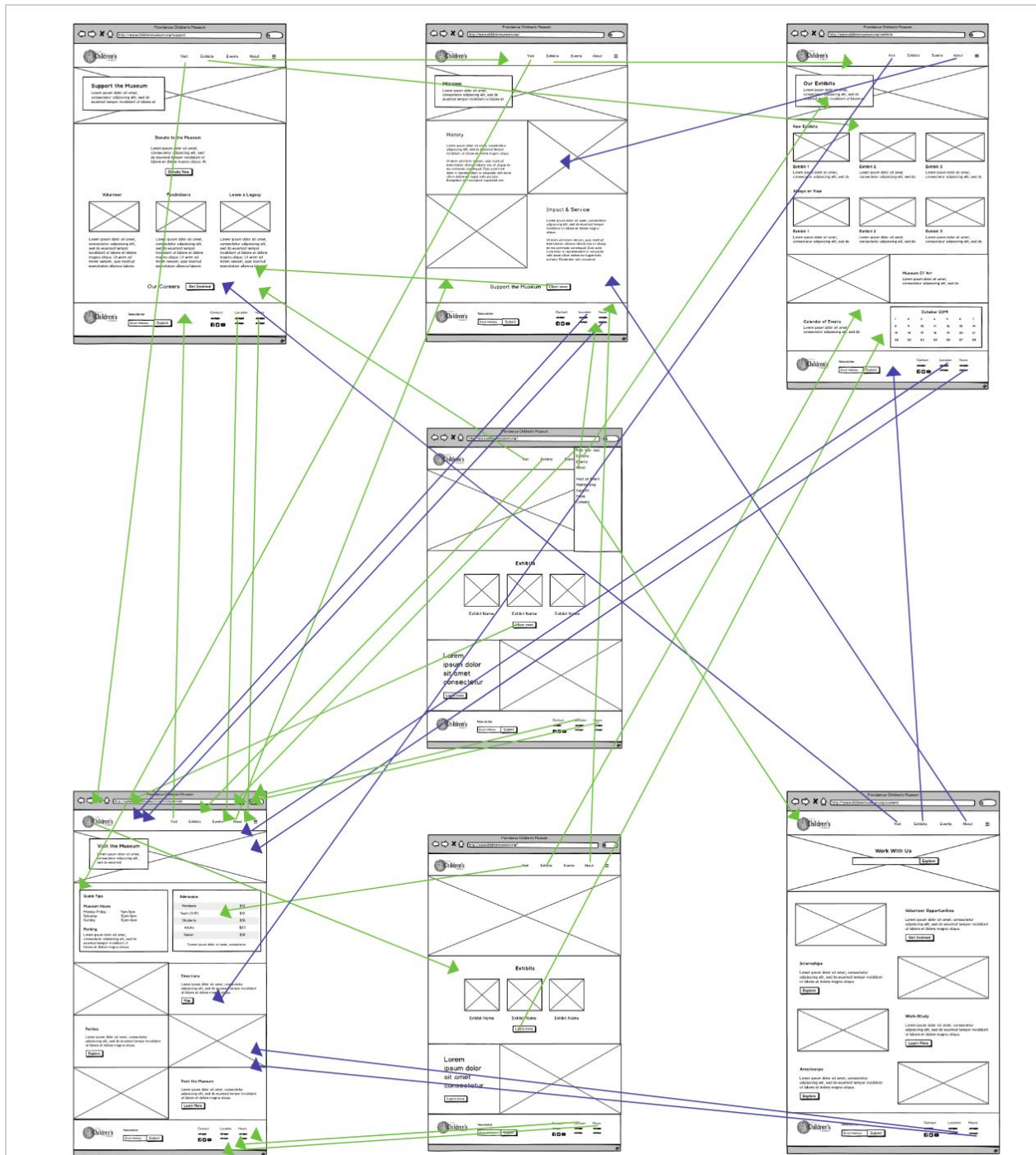


## Wireframe Navigation Flowchart

Top row: Support, About, Exhibits

Middle row: Homepage with menu visible

Bottom row: Visit, Homepage, Careers



Essentially, the navigation bar at the top facilitates easier navigation to key webpages (Visit, Exhibits, Events, and About). Buttons on each webpage help the user quickly find related information.

View larger image (`wireframes_flowchart.jpg`) in the zip folder.

## Visual Redesign

### Design Choices



Based on our wireframes, we made high-fidelity mockups of the homepage and exhibits page using Adobe XD, making many design changes to improve the user experience. To improve readability, we used small blocks of text, bolded headings, 2 accent colors from the logo, a grid layout for exhibit information, and increased white space in the layout. We aligned images and text in a consistent manner to better organize page content, increasing image size to make the page layout more accessible. We implemented an underline in the navigation bar which appears on hover to indicate clickable links. To highlight pages with key information, we relocated the shortened navigation bar to the top. Important information (e.g., the museum's address and hours) is now displayed in the footer.


### High-Fidelity Mockups (also in `visual_redesign` folder)

1. Homepage
2. Exhibits page




## Homepage


[Visit](#)[Exhibits](#)[Event](#)[About](#)




### Featured Exhibits



**Water Ways**  
Discover the swirling, whirling ways of water in an all-new water play environment!



**Play Power**  
Send objects soaring through air tubes and celebrate the power of children's play.





**Children's Garden**  
Explore a garden of native plants, a perfect place for a picnic lunch or active play.

[Learn More](#)

## We inspire and celebrate learning through active play




[Learn More](#)





[Join Our Newsletter](#)

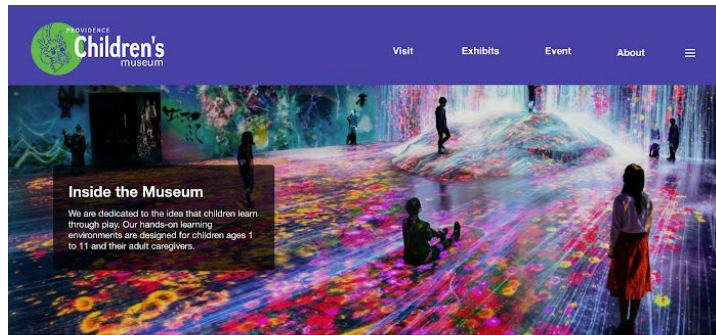
[Subscribe](#)

[Contact Us](#)  
(401) 273-5437  


[Location](#)  
100 South Street  
Providence, RI 02903

[Museum Hours](#)  
M-F 9am-5pm  
Sat 11am-4pm  
Sun 12pm-4pm

## Exhibits



### New Exhibits



#### Water Ways

Discover the swirling, whirling ways of water in an all-new water play environment!



#### Play Power

Send objects soaring through air tubes and celebrate the power of children's play.



#### Children's Garden

Explore a garden of native plants, a perfect place for a picnic lunch or active play.



#### The Climber

Wriggle and stretch through a high climbing maze.

### Always on View



#### Thinkspace

Experiment with shapes and spaces through hands-on puzzles and challenges.



#### Littlewoods

Climb into a tree house in an enchanting woodland environment.



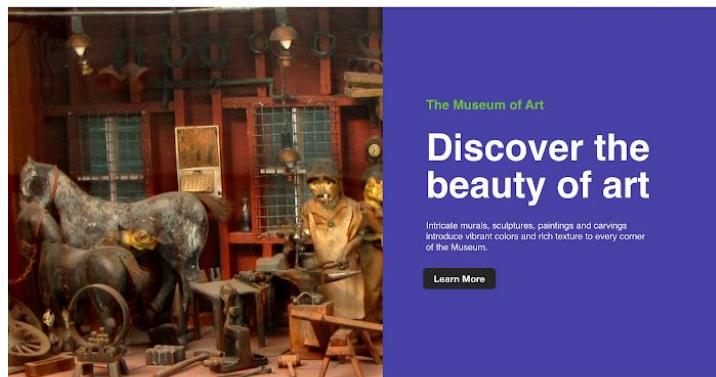
#### Discovery Studio

Visiting space designed for science and nature exploration and art experimentation.



#### Strings Attached

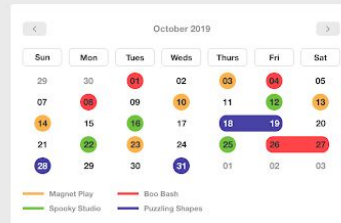
Bring mathematics to life and the artistry of two Rhode Island artists.



### Get Involved

There's always exciting activities happening at the museum. Through our calendar of events, you can discover ways to get involved beyond just the regular museum hours.

[Learn More](#)



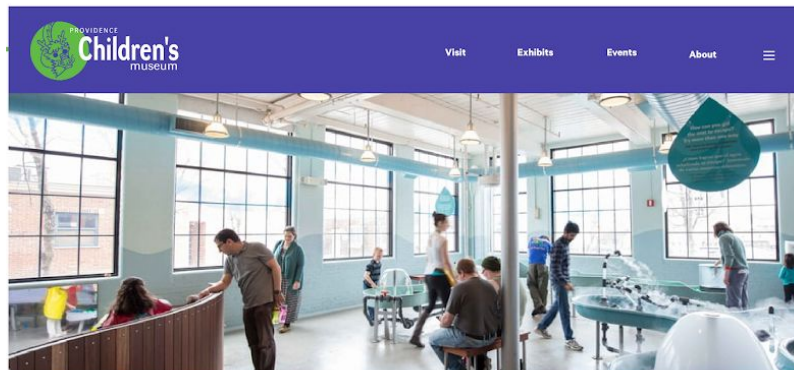


## Responsive Redesign

To add responsiveness to our visual redesign, we made annotated mockups to describe how different interface elements change for three screen sizes: a smartphone and tablet in portrait orientation, and a 4K widescreen desktop monitor.

**Annotated Mockups** (also in `annotated_mockups` folder)

### Homepage



#### Navigation Bar

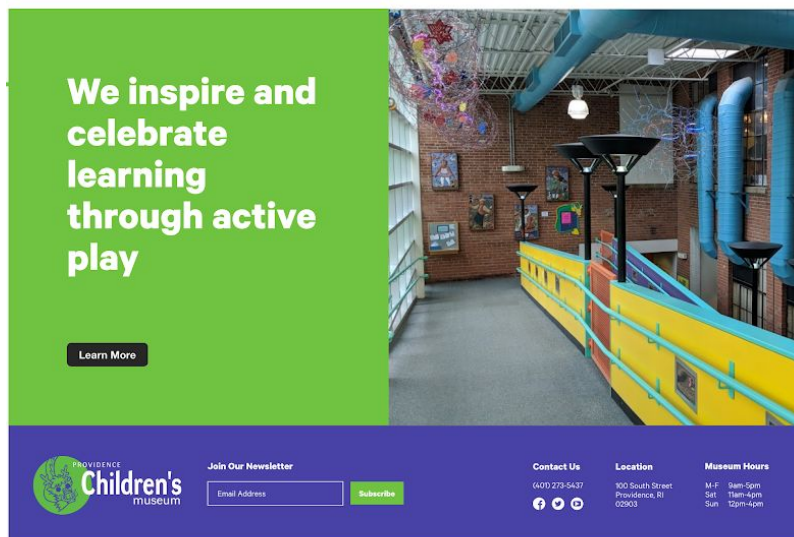
- Desktop/Tablet: Navbar links aligned right

- Phone: Navbar links centered underneath logo

#### Image

- Desktop/Tablet: Image adjusts to fit screen width

- Phone: Image adjusts to fit screen width



#### Footer

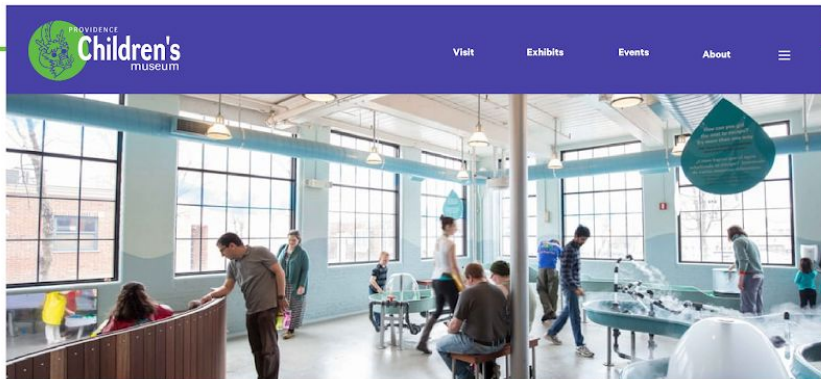
- Desktop/Tablet: All footer content and logo are displayed in single horizontal row that adjusts to fit screen width. Logo is left aligned

- Phone: Each of the 4 footer content items (newsletter, contact us, location, museum hours) are displayed in a 2 x 2 grid. Logo is displayed above 2 x 2 grid and centered

## Logo

- Desktop/Tablet: Aligned left

- Phone: Logo centered



## Featured Exhibits Section

- Desktop/Tablet:

Title text aligned left

3 images are displayed in a row that adjust to fit screen width

- Phone:

Title text centered

3 images are displayed in a single vertical column

Adjust text size to scale

### Featured Exhibits



**Water Ways**

Discover the swirling, whirling ways of water in an all-new water play environment!



**Play Power**

Sand objects soaring through air tubes and celebrate the power of children's play.



**Children's Garden**

Explore a garden of native plants, a perfect place for a picnic lunch or active play.

[Learn More](#)

## Text & Image Section

- Desktop/Tablet:

Text and image are displayed in a single horizontal row with text on the left and image on the right

Image is 50% of screen

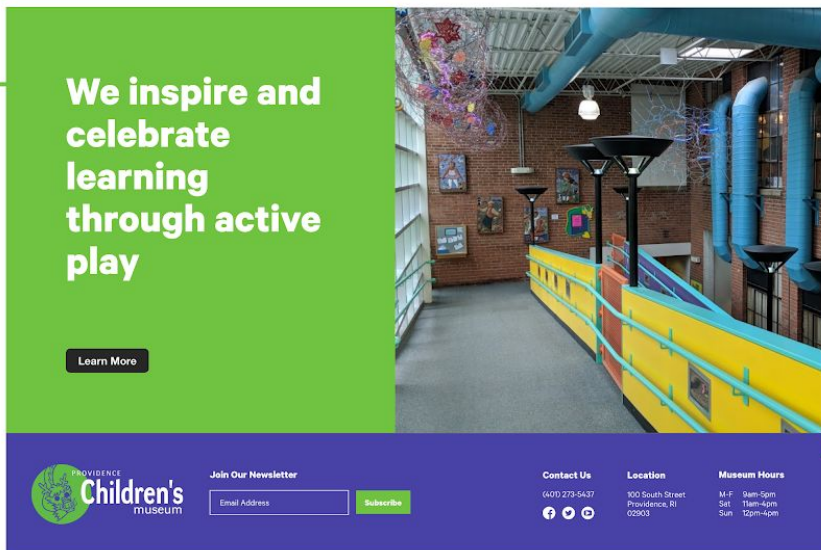
Text and button aligned left

- Phone:

Text and image are displayed in a single vertical column with the image displayed above the text

Image fills width of entire screen

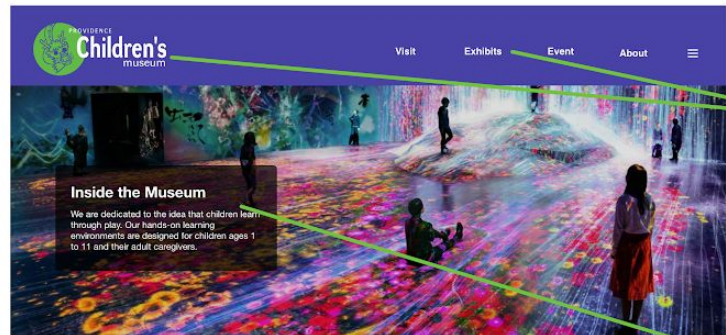
Text and button centered





## Exhibits

### Children's Museum Redesign Exhibits Page Annotated Visual Design



#### New Exhibits

**Desktop/Tablet:**  
Section title ("New Exhibits" and "Always on View") anchor left  
Text and rectangle left aligned on image, carousel images with arrow pop-ups occurring when hover left and right of the carousel

**Phone:**  
Section title center on screen  
Decrease image size to carousel on page, show only one and half of the second exhibit in the carousel on load, users can swipe right to see additional exhibits  
Adjust text size to scale



**Water Ways**  
Discover the swirling, whirling ways of water in an all-new water play environment!



**Play Power**  
Send objects soaring through air tubes and celebrate the power of children's play.



**Children's Garden**  
Explore a garden of native plants, a perfect place for a picnic lunch or active play.



**The Climber**  
Wiggle and stretch through a high-climbing maze.

#### Always on View



**Thinkspace**  
Experiment with shapes and spaces through hands-on puzzles and challenges.



**Littlewoods**  
Come into a tree house in an enchanting woodland environment.



**Discovery Studio**  
Vibrant space designed for science and nature exploration and art experimentation.



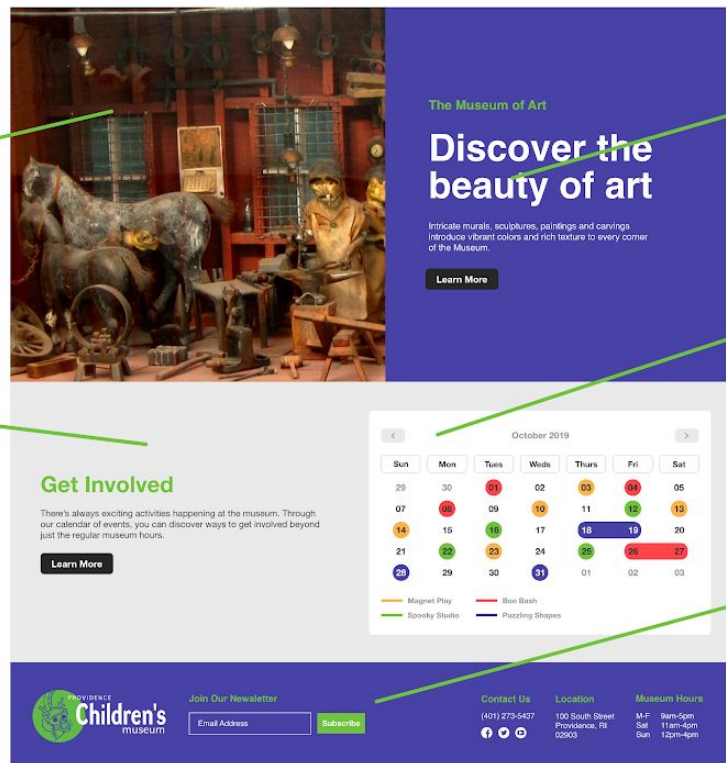
**Strings Attached**  
Bring memories to life and artistry of two Rhode Island...

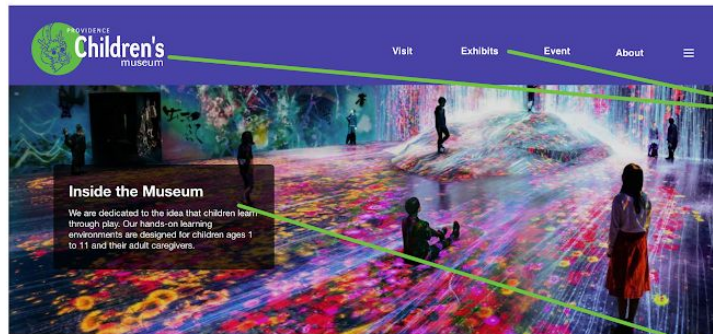
**Desktop/Tablet:**  
Pin image to left of screen, fill 50% of screen width, overflow: hidden;

**Phone:**  
Image moves above text, fill width of screen  
Button and text center to screen

**Desktop/Tablet:**  
Constant size, anchor left  
Text and button align left

**Phone:**  
Calendar shifts above text on screen  
Calendar only shows three weeks instead of 5  
Button and text center to screen





Desktop/Tablet:  
Pin search bar to left of screen  
Keep size constant  
Float nav items right  
Pin Children's Museum icon to left of page

Phone:  
Nav bar goes below Children's Museum icon  
All nav items become vertically aligned on click of new menu icon  
Nav bar and Children's Museum icon center on page

Desktop/Tablet:  
Image adjusts to fit page size (width: 100%)  
Box surrounding text remains constant size, text wraps to fit, anchored left

Phone:  
Image adjusts to fit entire screen (width 100%)  
Text box centers on page and scales with screen size  
Text and text box center on page

## New Exhibits



**Water Ways**  
Discover the swirling, whirling ways of water in an all-new water play environment!



**Play Power**  
Send objects soaring through air tubes and celebrate the power of children's play.



**Children's Garden**  
Explore a garden of nature's plants, a perfect place for a picnic lunch or active play.



**The Climber**  
Tangle and twist through a high climbing maze.

## Always on View



**Thinkspace**  
Experiment with shapes and spaces through hands-on puzzles and challenges.



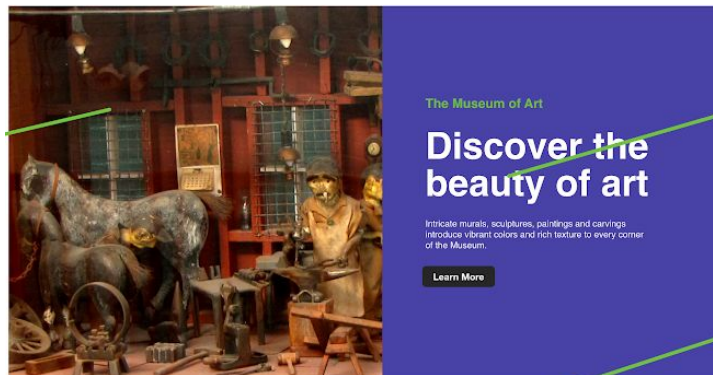
**Littlewoods**  
Climb into a tree house in an enchanting woodland environment.



**Discovery Studio**  
Vibrant space designed for science and nature exploration and art experimentation.



**Strings Attached**  
Bring marionettes to life and let artists of two Rhode Island p...



Desktop/Tablet:  
Constant size, anchor right  
Text and explore button align left

Phone:  
Text centers on page, below image,  
Scale with screen size, learn more button centers on text and page

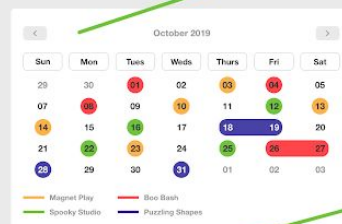
Desktop/Tablet:  
Pin calendar to right of screen, float event text below calendar  
If more than 6 events, carousel appears

Phone:  
Calendar moves above text "Get involved" in this section, fill width of screen shows three weeks instead of 5  
Center to screen

## Get Involved

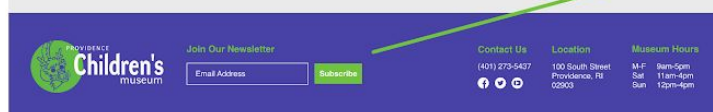
There's always exciting activities happening at the museum. Through our calendar of events, you can discover ways to get involved beyond just the regular museum hours.

[Learn More](#)



Desktop/Tablet:  
Constant size; anchor logo left and float headers in line centered  
Align left headers and text below

Phone:  
Scale to screen size  
Logo centers on screen  
Footer items in pairs next to each other  
Subscribe button falls below email address input and aligns left



## **Responsive Website**

We implemented a responsive version of the homepage according to our mockup using HTML and CSS. It can be viewed at `index.html`.

## **Future Work**

Currently, our webpage closely matches our homepage, except for the menu (an icon). In the future, we could use React to implement this functionality through [this library](#). In addition, we could make the homepage more consistent with the exhibits page by implementing a carousel in React for featured exhibits, similarly to [this example](#). Finally, we would implement the rest of the redesigned webpages.