Class 18: Designing Usable Static Interactivity

- Review: CSS Grid Layout
- Static Client-Side Interactivity
- Common Interactivity Design Patterns
- Interactivity Design Principles

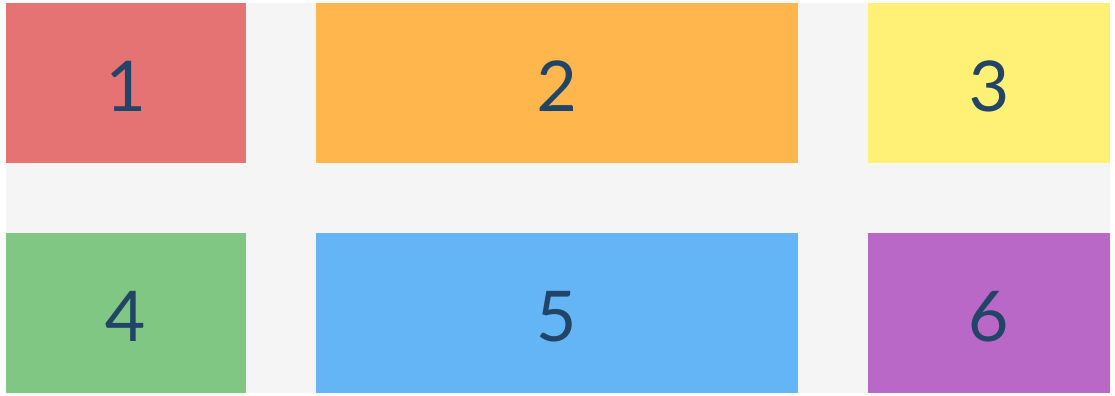
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CSS Grid Layout

A **two-dimensional** layout **container** model.

```css
.grid-container {
  display: grid;
  gap: 1em;
  grid-template-columns: 1fr 2fr 1fr;
}
```

```html
<div class="grid-container">
  <div>1</div>
  <div>2</div>
  <div>3</div>
  <div>4</div>
  <div>5</div>
  <div>6</div>
</div>
```



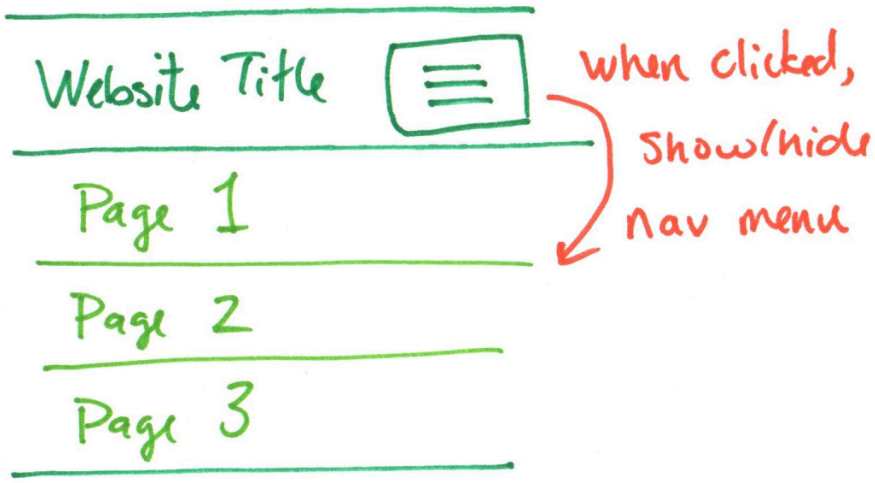
Static Client-Side Interactivity

Static Client-Side Website Interactivity

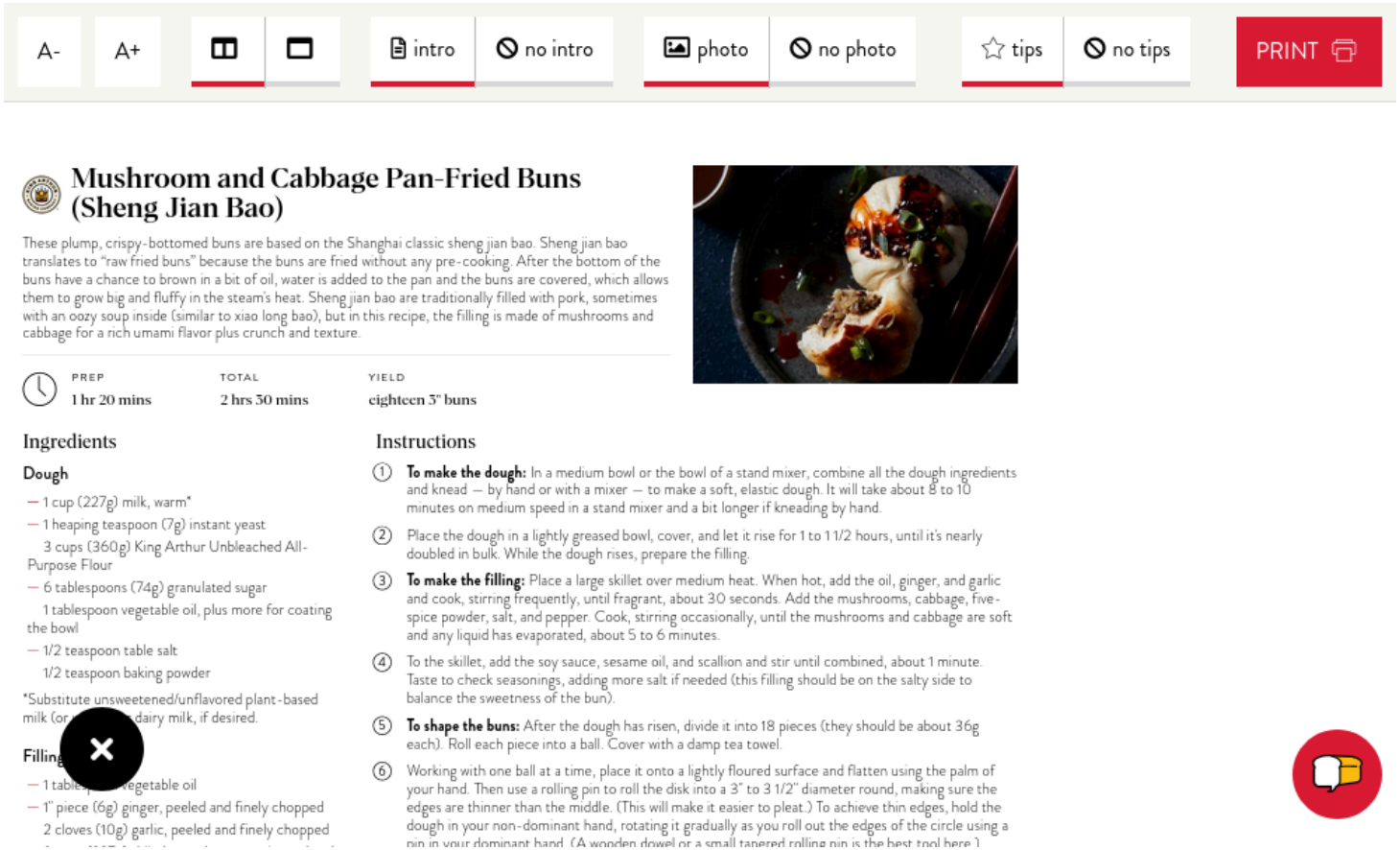
Changing the style of an existing website's content using **client-side scripting** (JavaScript) in response to the user's behavior.
(No new content, HTML, CSS is loaded.)

Example:

When the user taps the "hamburger button", *show/hide* the **existing** navigation menu.



Example: Adaptable View Interactivity



Activity: Interactivity Design Patterns

Working with a peer:

1. **Reflect:**

   What are some common interactivity design patterns you've seen?

2. **Find** an example (or two) of common interactivity *design patterns*.

Gotcha: Some Interactivity is Server-Side

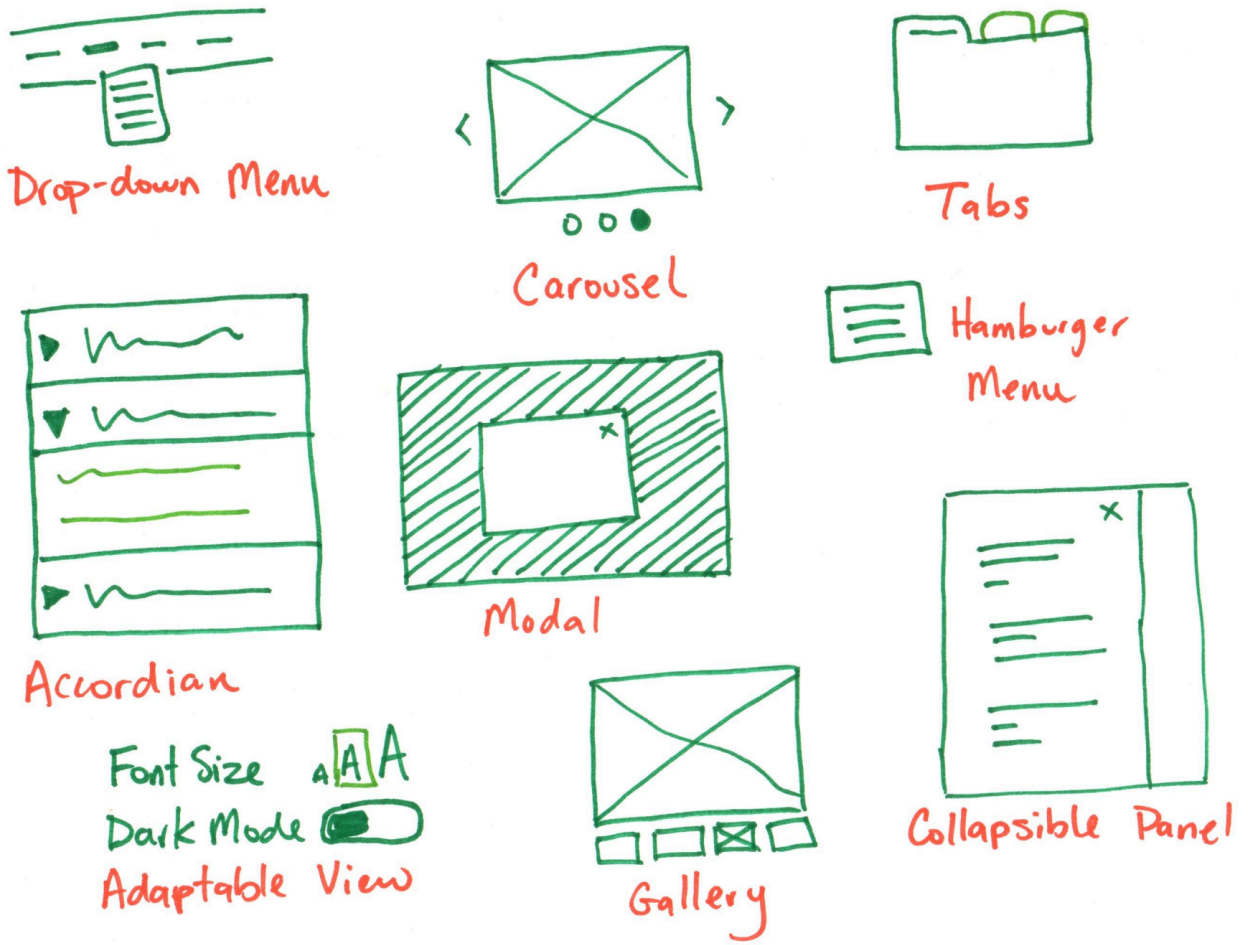
Client-side interactivity changes the current web page using only the **existing** HTML, CSS, and JavaScript (static content).

Server-side interactivity sends additional requests to the web server to dynamically change the page (dynamic content).

Server-Side Interactivity

- Search
- Autocomplete
- Most filtering
- Infinite scrolling
- Shopping carts
- …

Client-Side Interactivity Design Patterns



Why Interactivity?

Your goal for the website:
The site's audience is able to accomplish their goals.

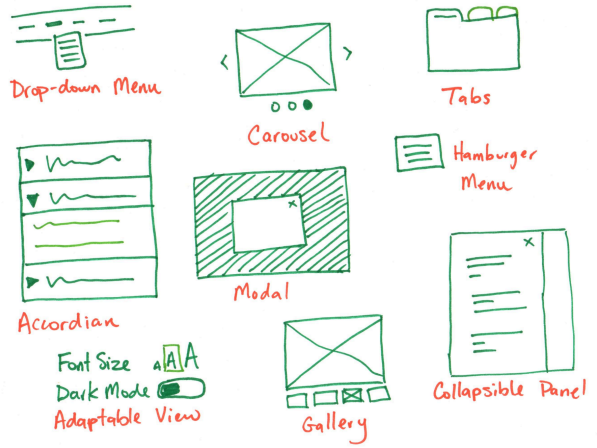
Interactivity goal:
Enhance the functionality of the website to **assist users** in pursuit of their goals.

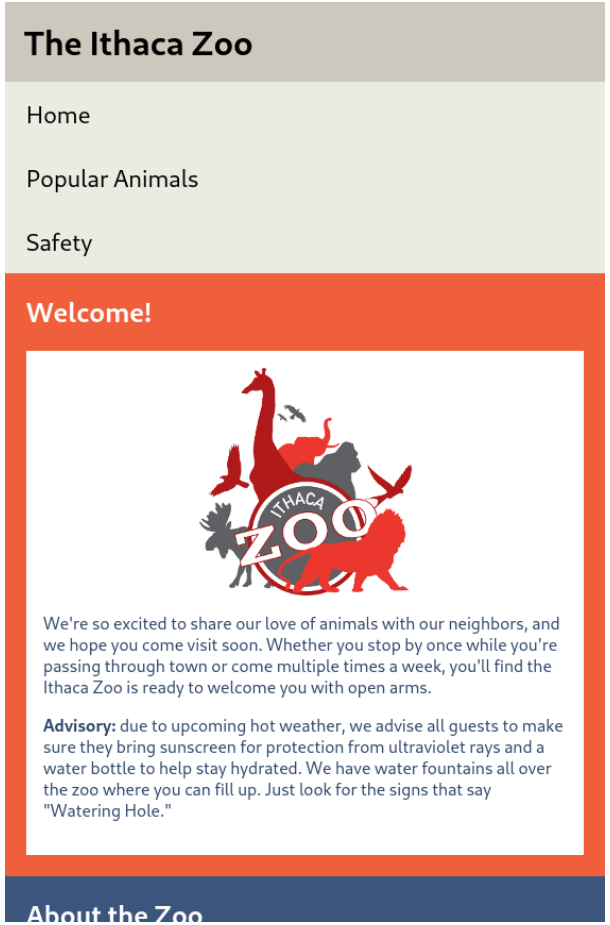
Interactivity should ***enhance*** **your audience's experience and help them accomplish their goals**.

Activity: Interactivity Design Patterns

Discuss ideas for interactivity for the Ithaca Zoo website.

Hint: How might interactivity help you to utilize the *limited* screen space to enhance content usability?

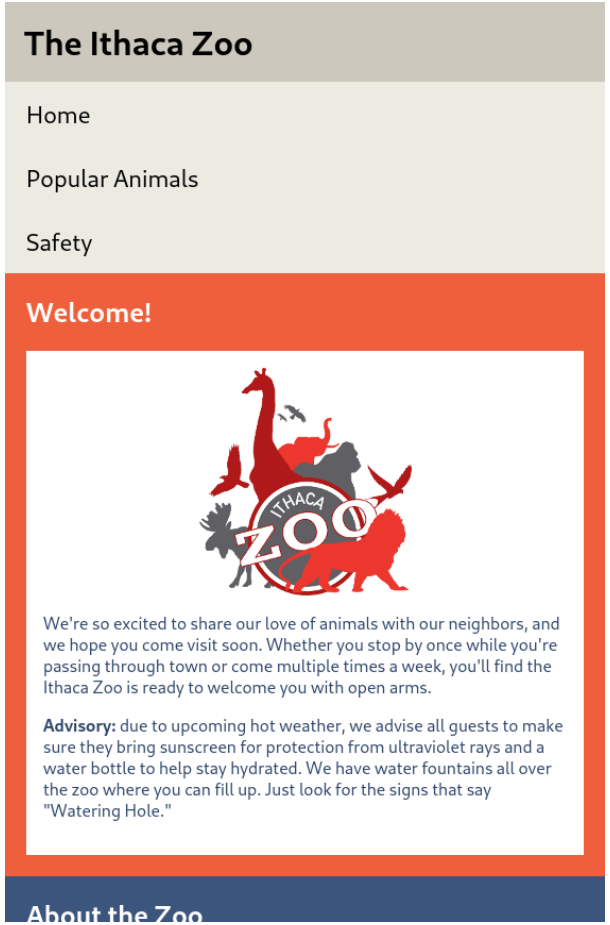




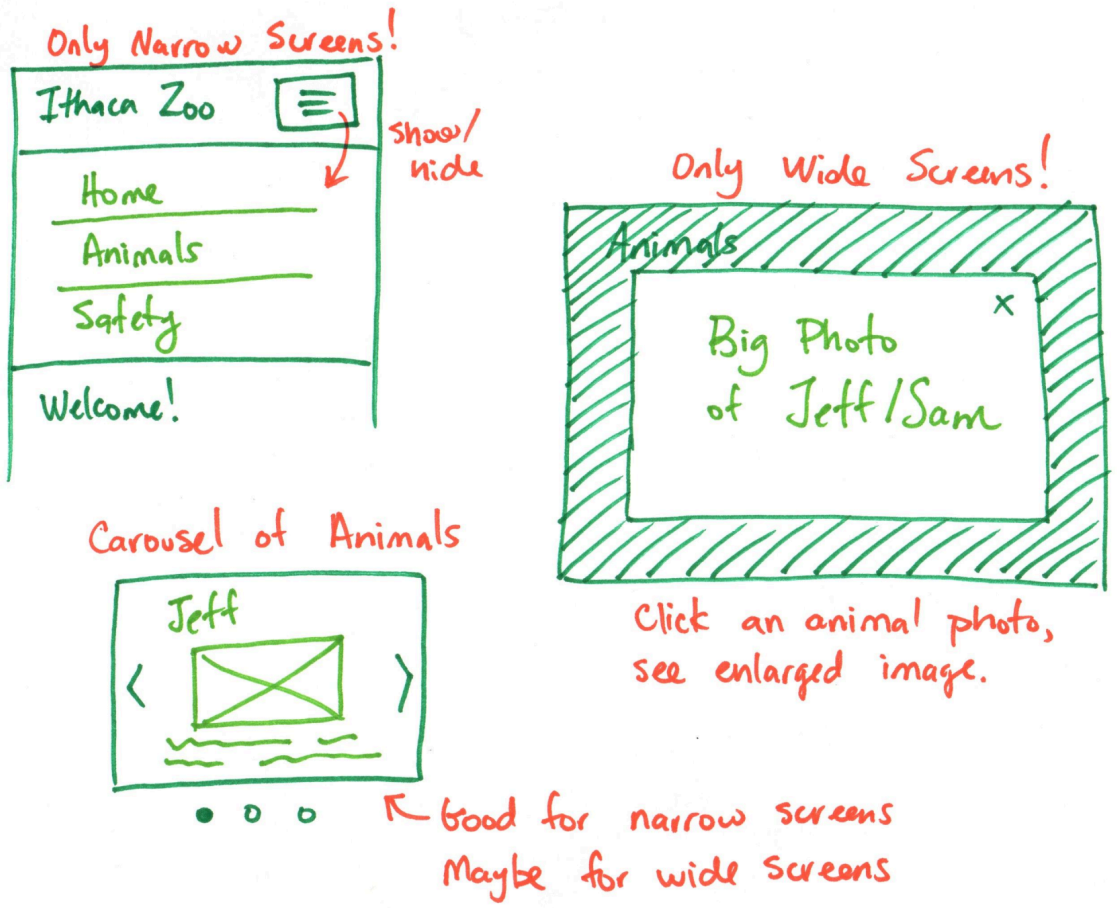
Activity: Interactivity Design Practice

Design (sketch) interactivity for the Ithaca Zoo website on your handout.

Annotate your sketch to **describe how the interactivity works**. (e.g. when clicked/tapped, show/hide, etc.)



Example: Zoo Interactivity Ideas



Gotcha: Non-Functional Interactivity

Don’t use interactivity just because “you can!”

Avoid interactivity designed to “wow” or “impress.”
(e.g. scrolling backgrounds, flashy animations, etc.)

Avoid hiding content behind interactivity.
Most content does not belong in a carousel or accordion.

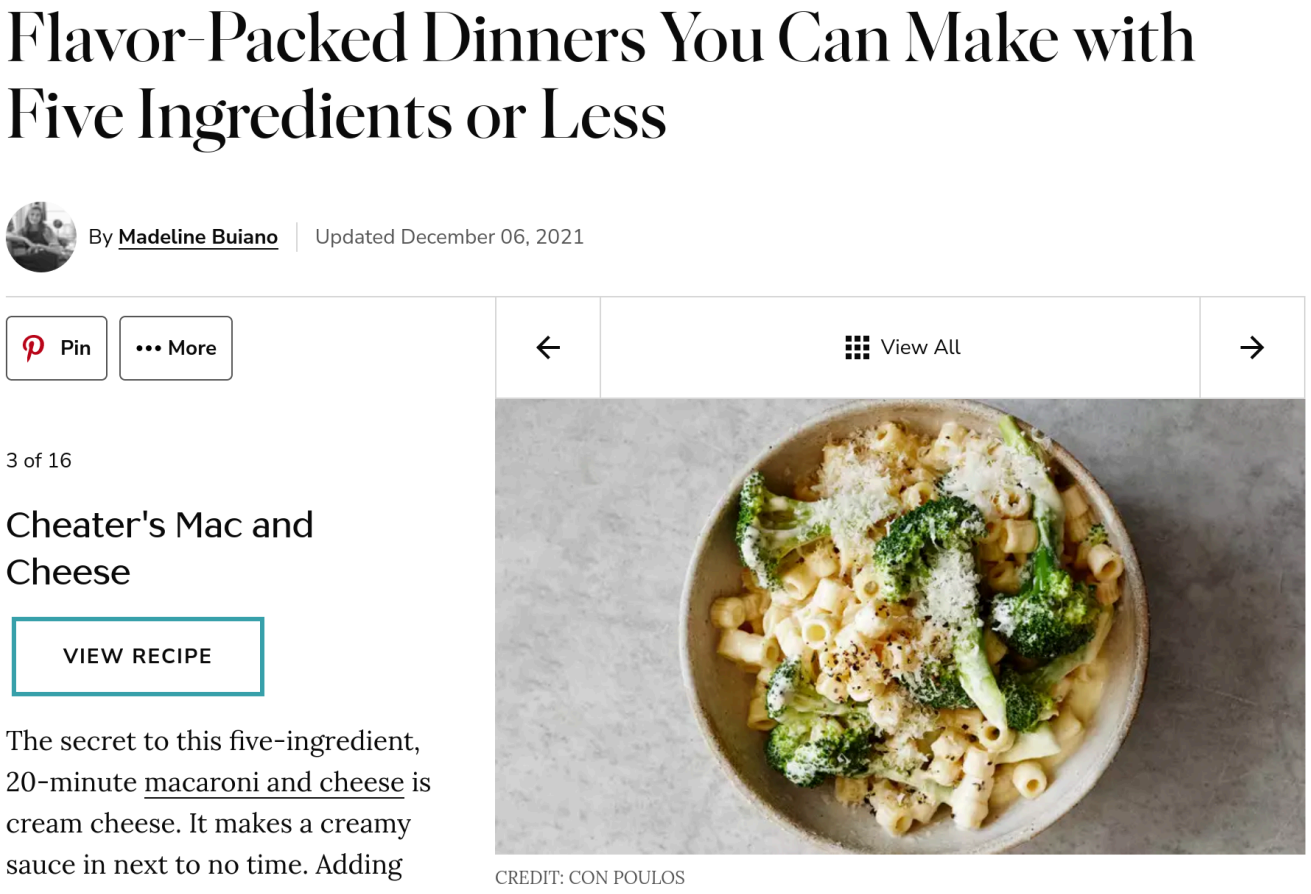
Tip: Ask yourself, “if I were a user of this site, would I find this interactivity frustrating/annoying or helpful?” If your answer is *helpful*, you’re probably on the right track!

Activity: Functional Interactivity Critique

marthastewart.com
previously used carousels for **lists** of recipes.

With a peer, **critique** the interactivity in regard to **functionality**.

Tip: "Is the interactivity frustrating/annoying or helpful?"



Tip: Functional Interactivity

Does the interactivity insert additional **barriers** to accomplishing the user's goals? For example, does the user need to click/tap *many* times to accomplish their goals?

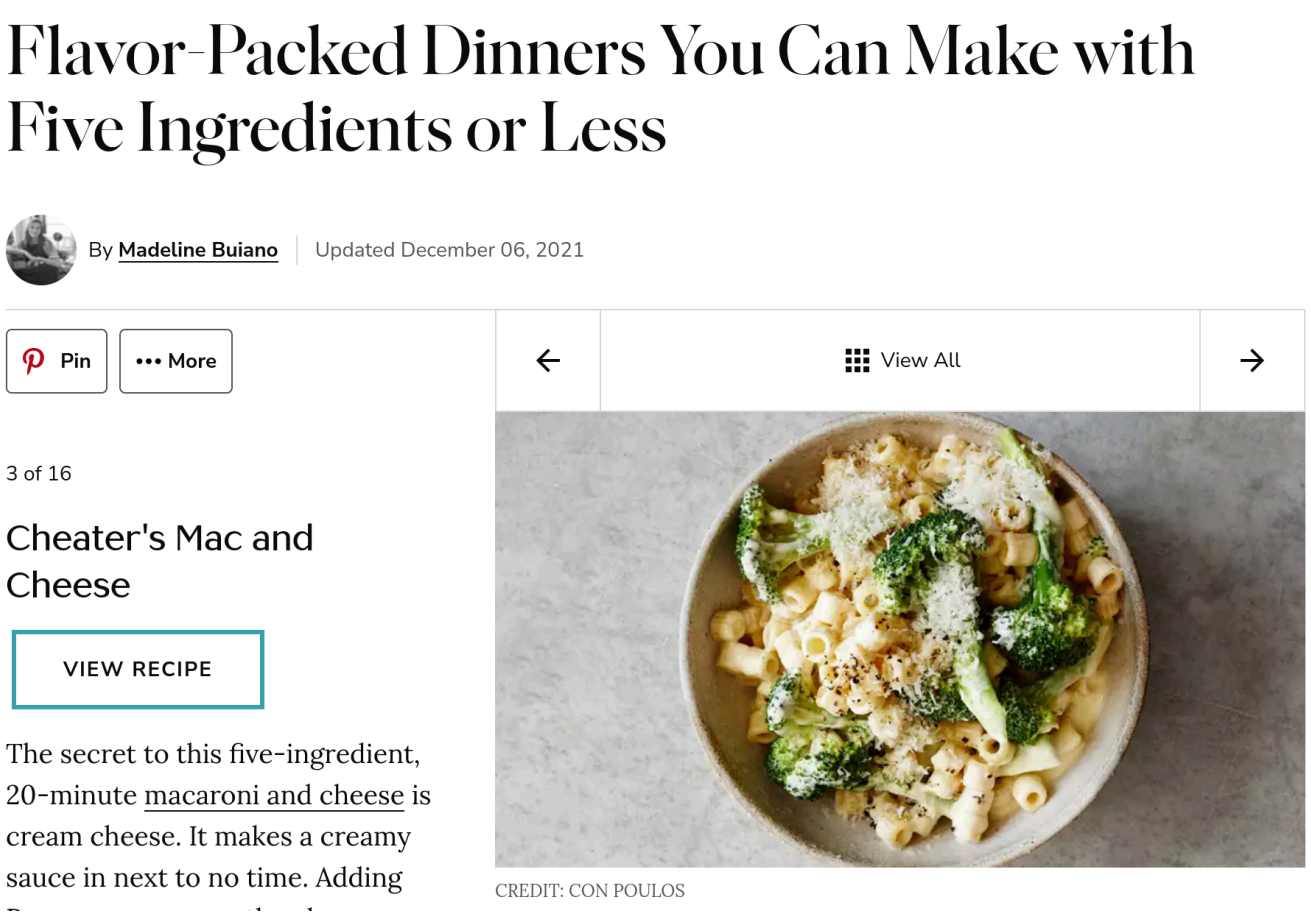
Tip: Reduce the number of clicks/taps to accomplish a goal.

Activity: Redesign the List of Recipes

Working with a **peer**:

Discuss the likely audience's goals for viewing a list of recipes.

On your handout (back), redesign the list of recipes to be usable for the site's audience.

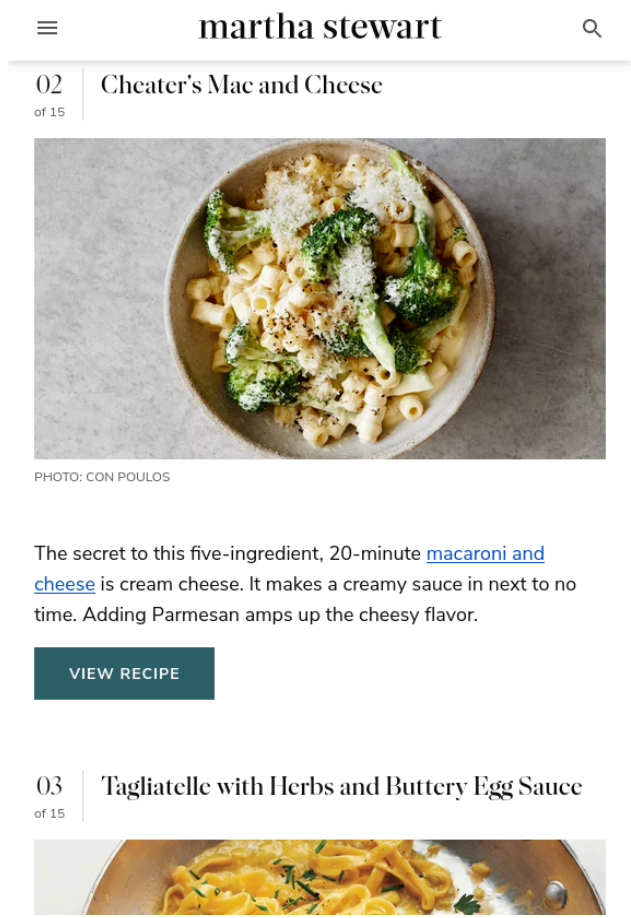


Example: Usable List of Recipes

No interactivity; no carousel.

Structure a **simple list** of recipes.

The interactivity required many clicks/taps to access all the content. The interactivity was a barrier to the user's goals.



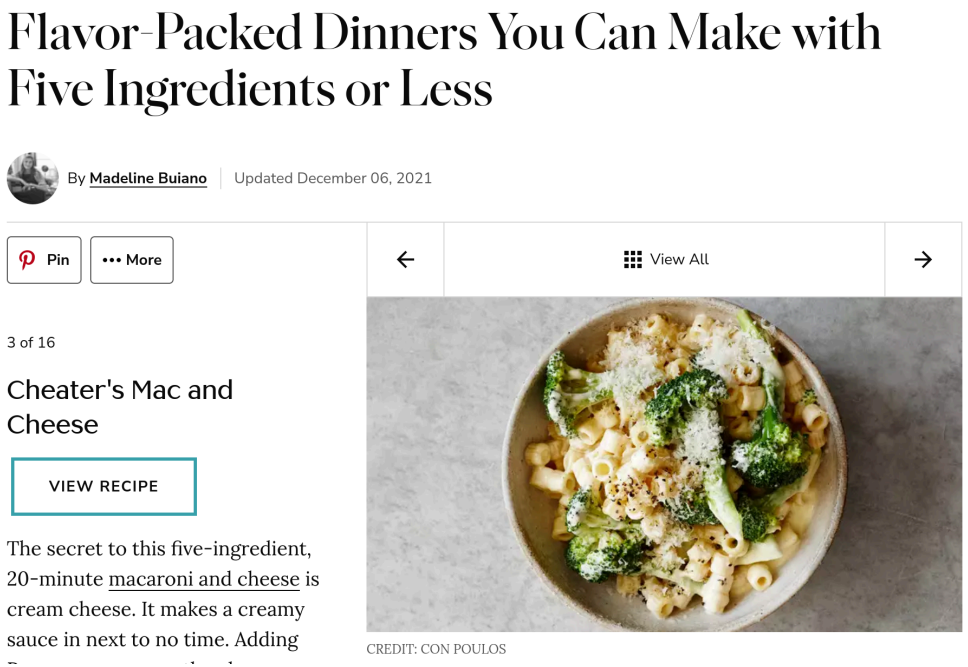
Interactivity Design Principles

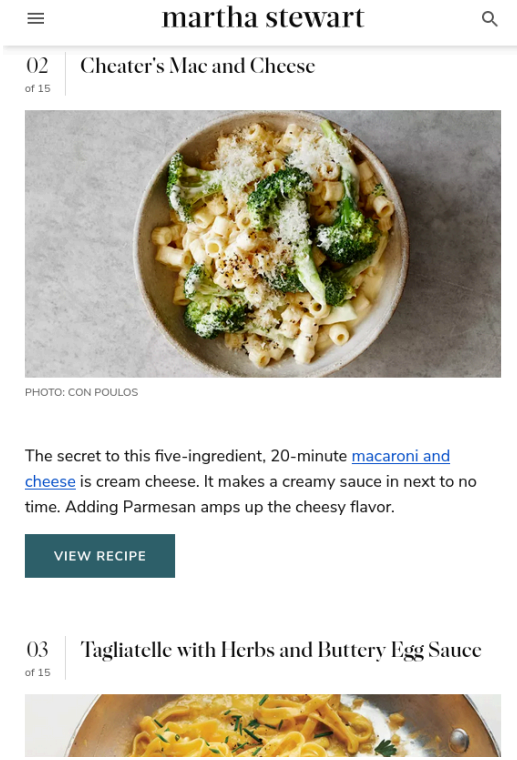
Interactivity Design Principles

- **Functional** – assists with the user's goals.
- **Affordances** – provide strong clues for the operation of things.
- **Visibility** – make the relevant parts visible.
- **Feedback** – give each action an immediate and obvious effect.
- **Familiarity** – conform to established design patterns.

Interactivity – Functional

Does the interactivity assist with the user's goals?
Or is content hidden behind unnecessary clicks/taps?

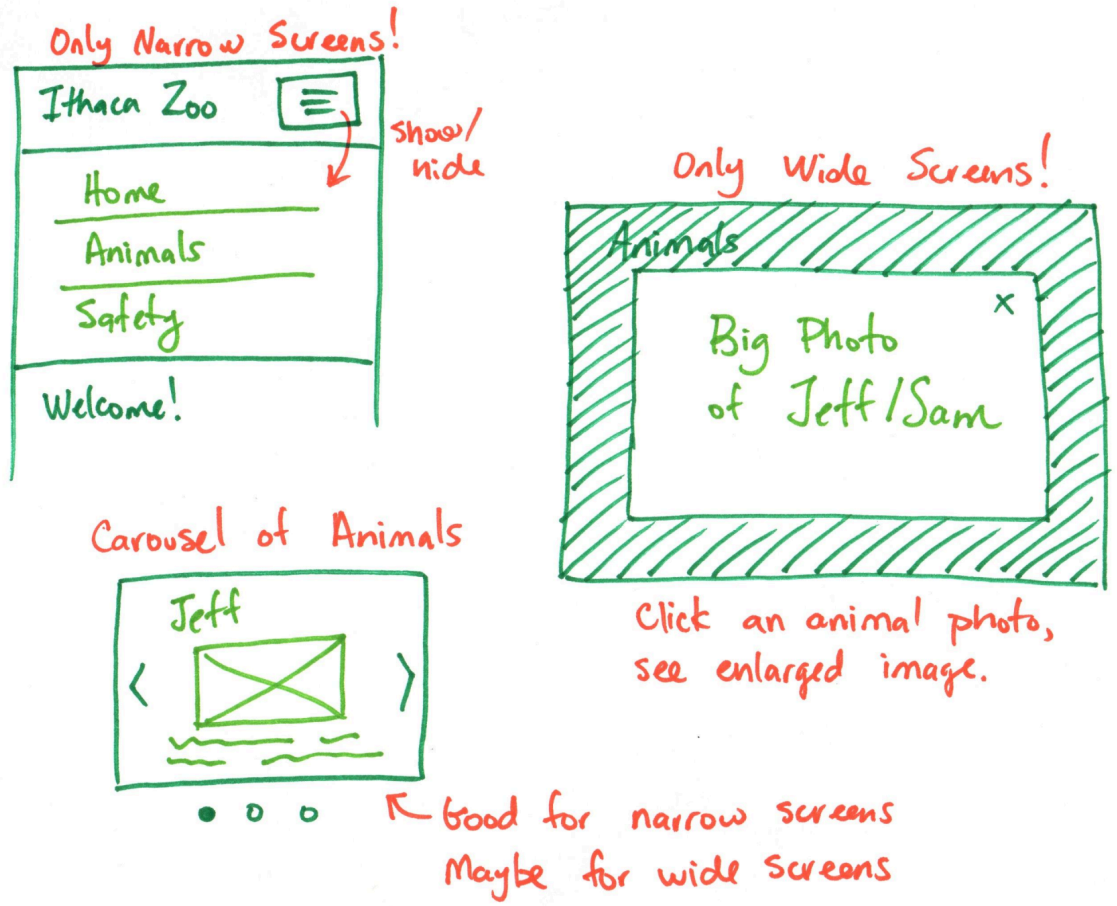




Discussion: Functional Interactivity Critique

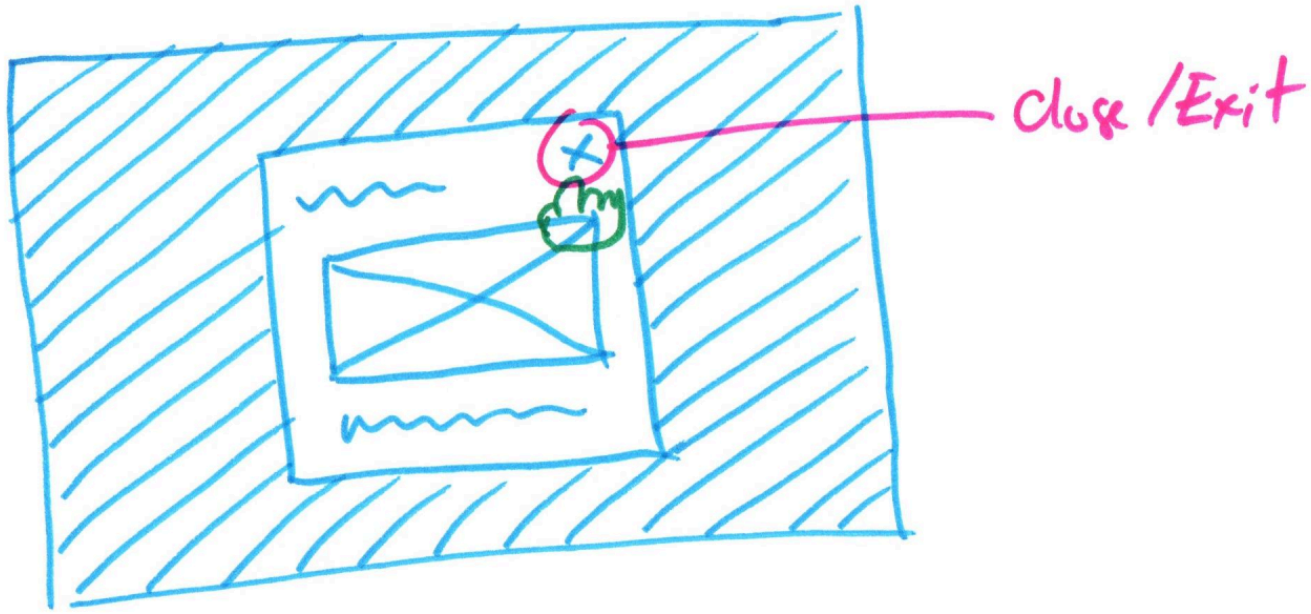
Critique the **function** of **hamburger menu** interactivity.

Example: The navigation menu takes a lot of space on limited screen sizes. One click to show/hide *likely* improves functionality of the page to display more **content**.



Interactivity – Affordances

What about the appearance gives the user **clues** about how the interactivity may function?



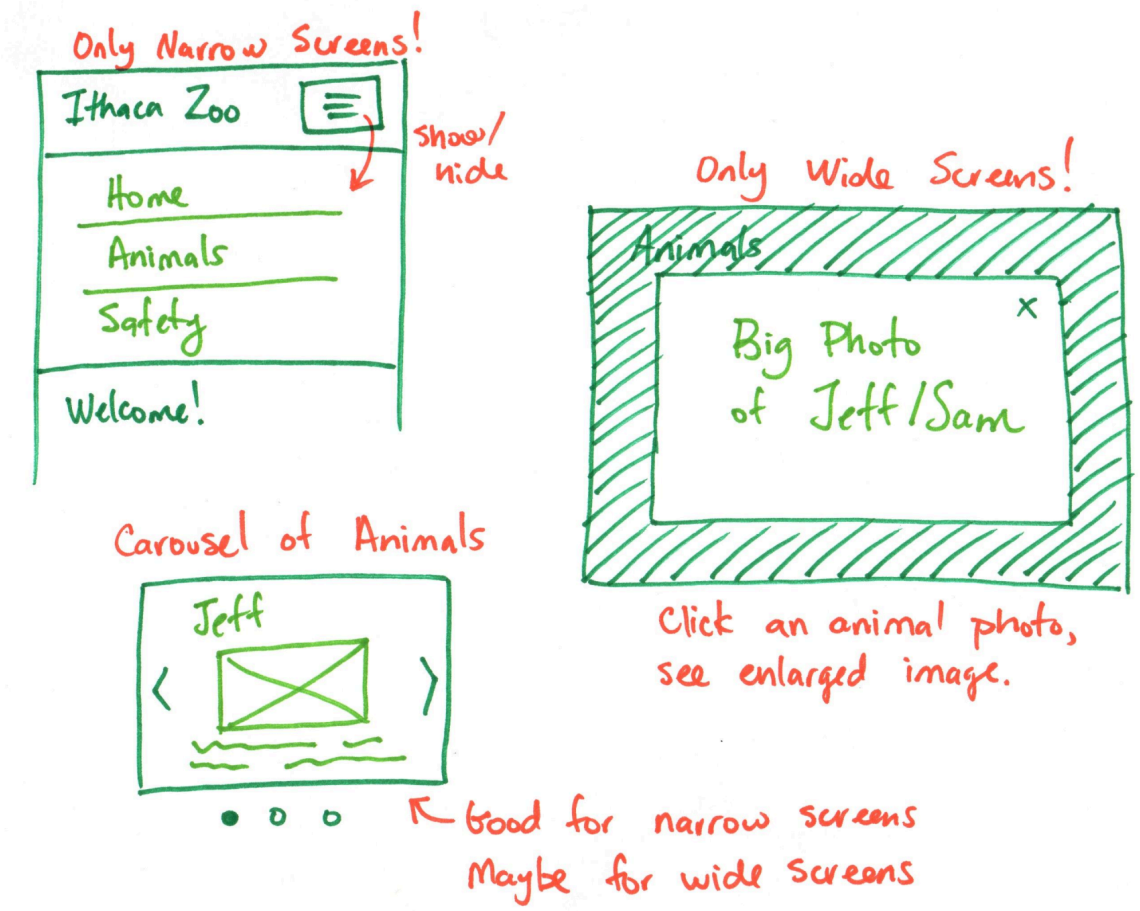
Discussion: Affordance Interactivity Critique

Critique the **affordances** of **hamburger menu** interactivity.

Example: The hamburger button indicates that users may interact with it.

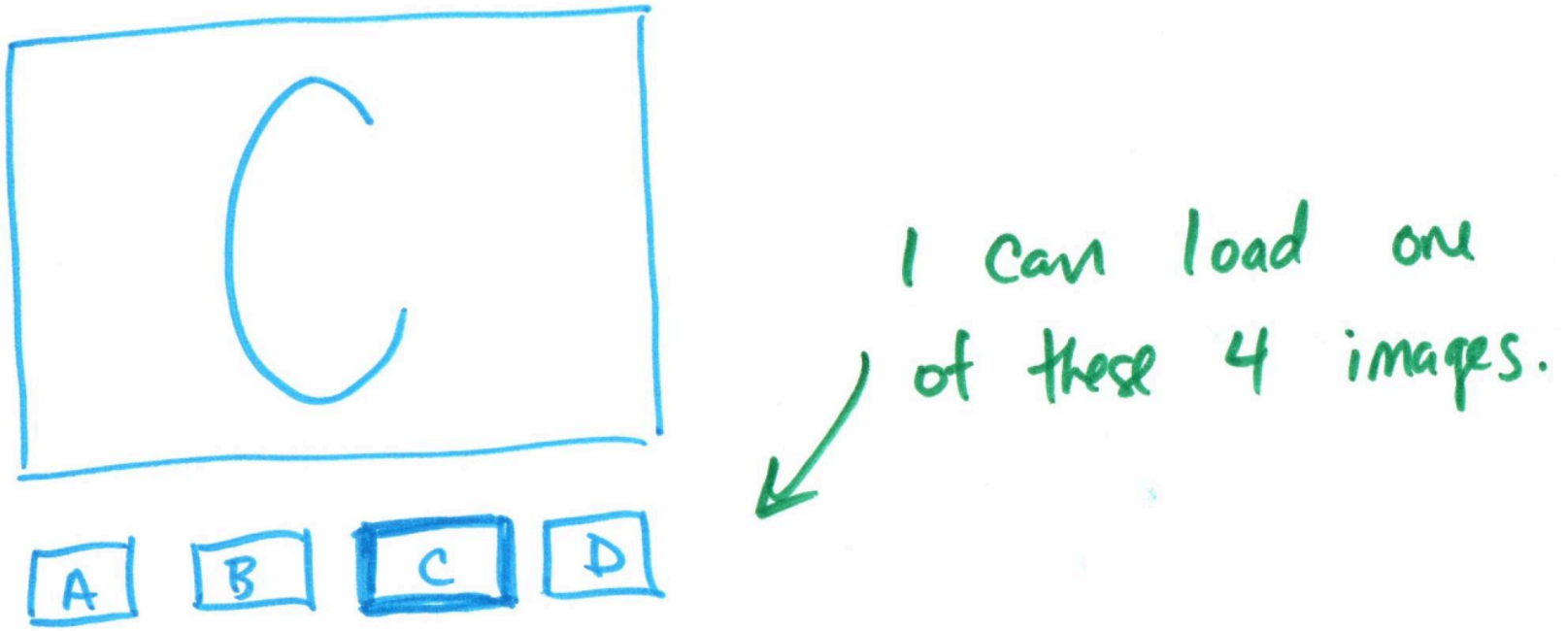
Other examples:

- The close button in the modal.
- The next and previous buttons in the carousel.



Interactivity – Visibility

Are the possible actions visible to the user?

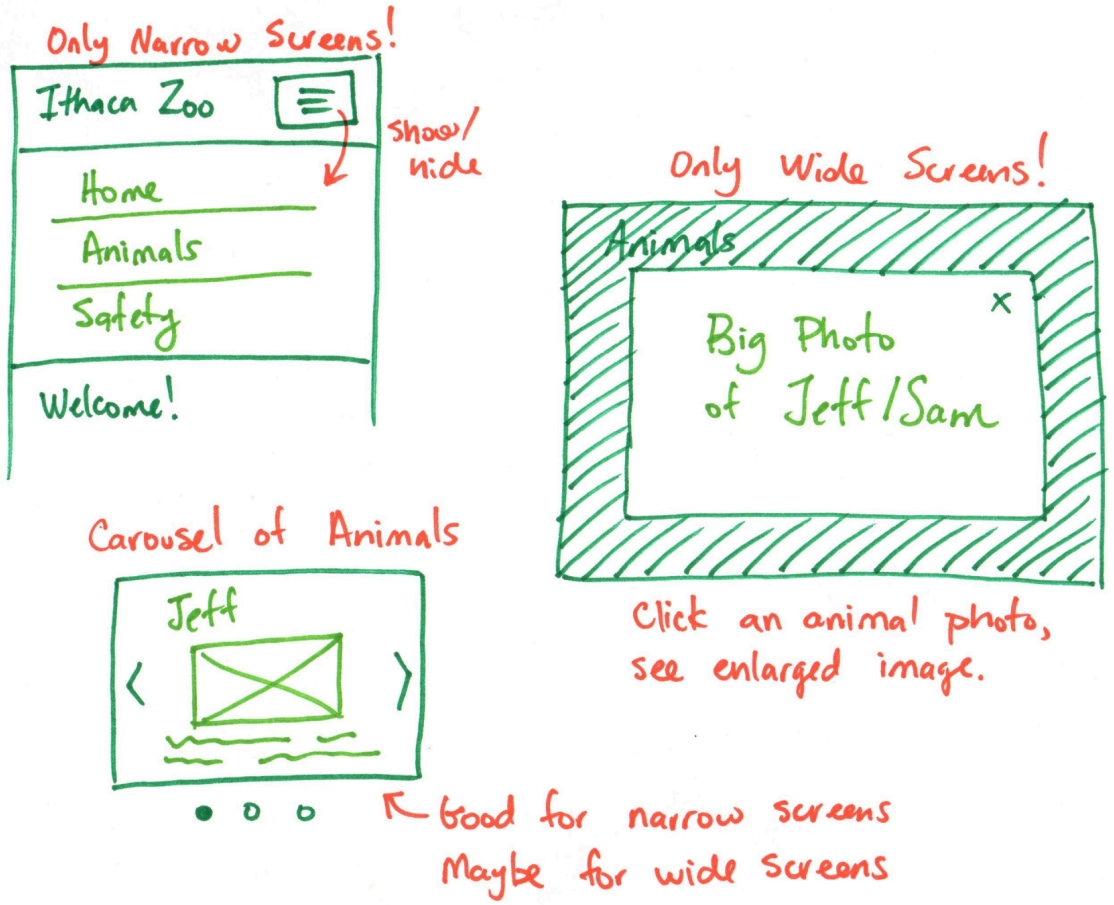


Discussion: Visibility Interactivity Critique

Critique the **visibility** of **hamburger menu** interactivity.

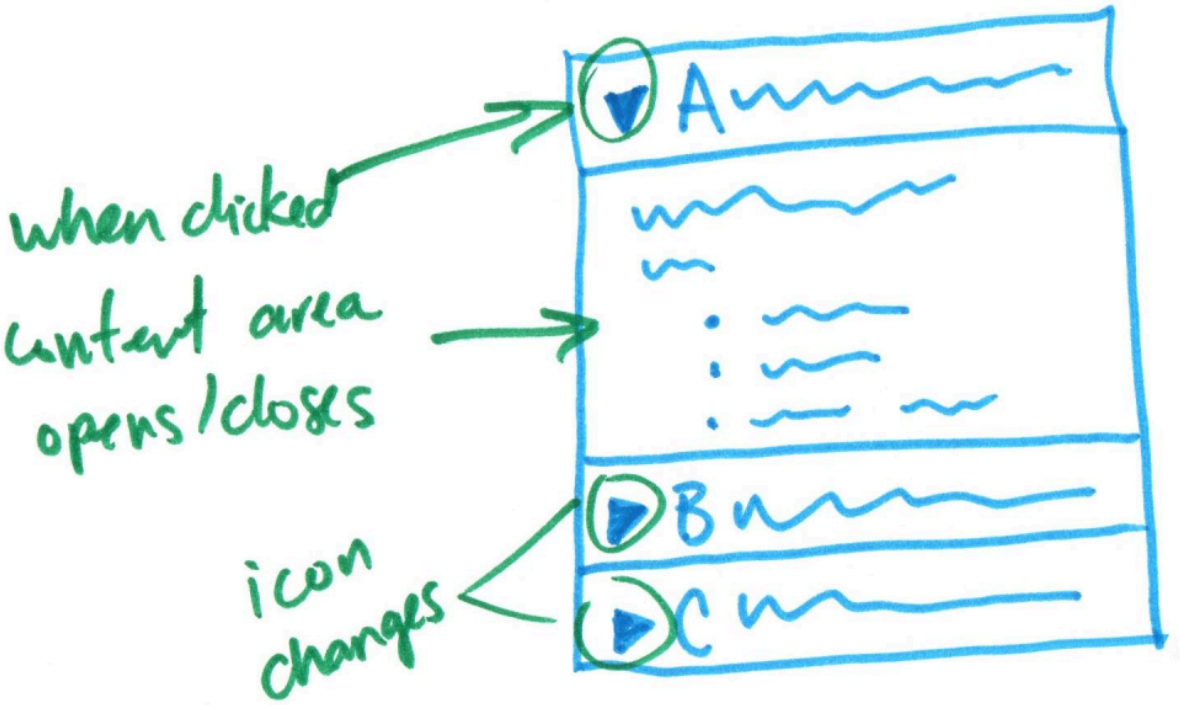
Hint: Are all the **actions** visible to the user?

Example: The open/close action is visible with the hamburger menu button.



Interactivity – Feedback

What feedback does a user get once an action is performed?

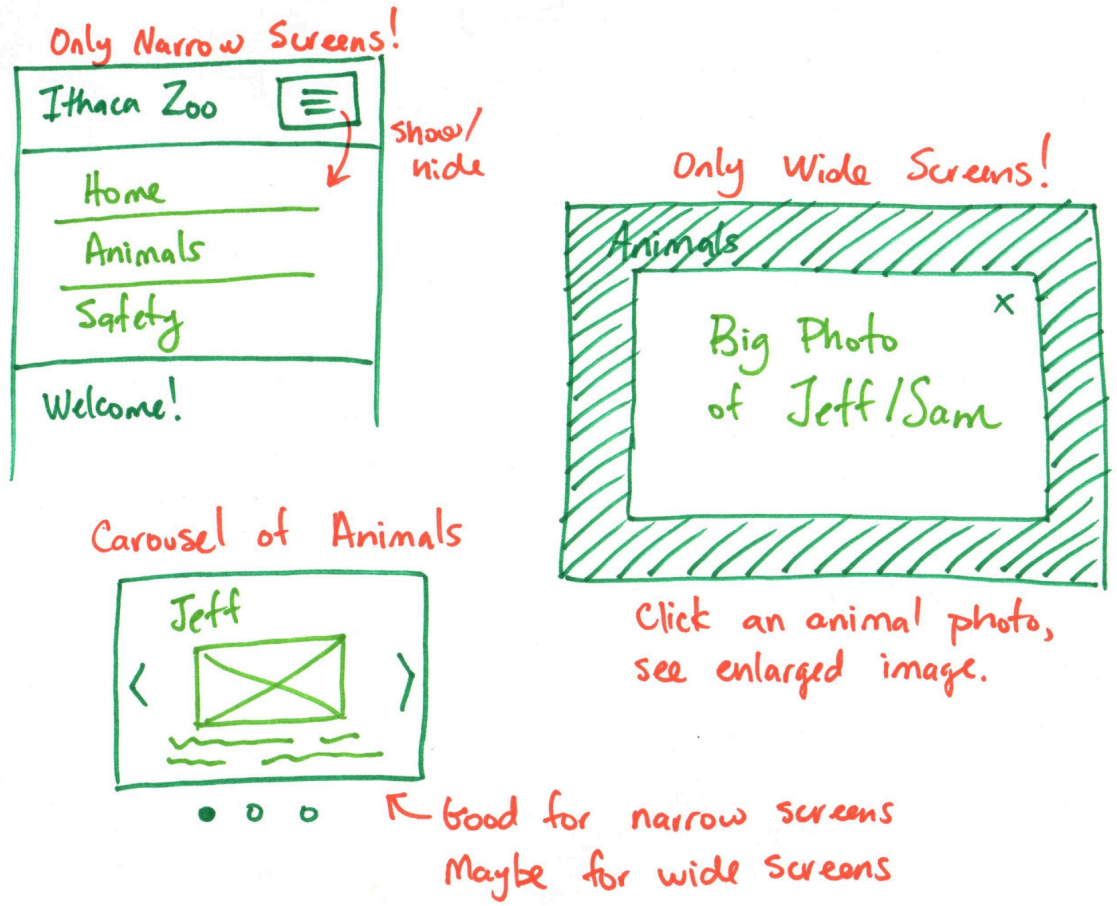


Discussion: Feedback Interactivity Critique

Critique the **feedback** of **hamburger menu** interactivity.

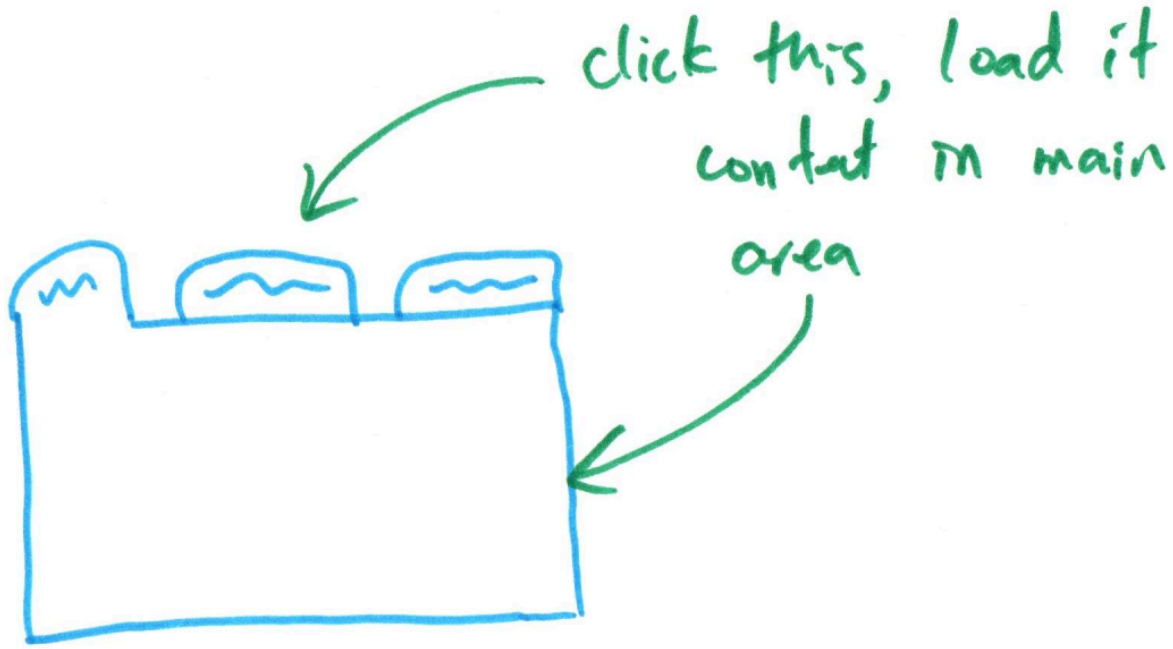
Tip: How does the user know that the action occurred?

Example: When the hamburger button is clicked/tapped, the menu shows/hides. The user gets immediate feedback.



Interactivity – Familiarity

Is the interactivity predictable and consistent with the user's expectations?

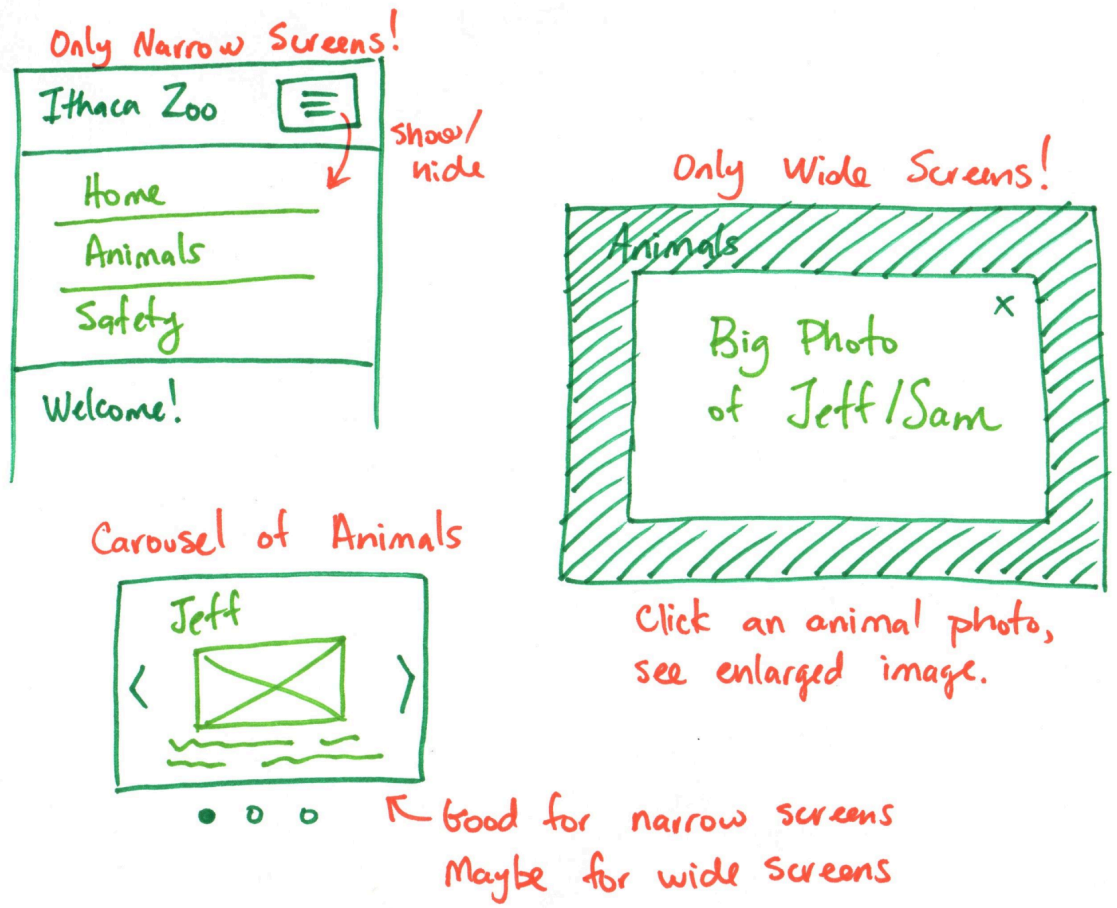


Discussion: Familiarity Interactivity Critique

Critique the **familiarity** of **hamburger menu** interactivity.

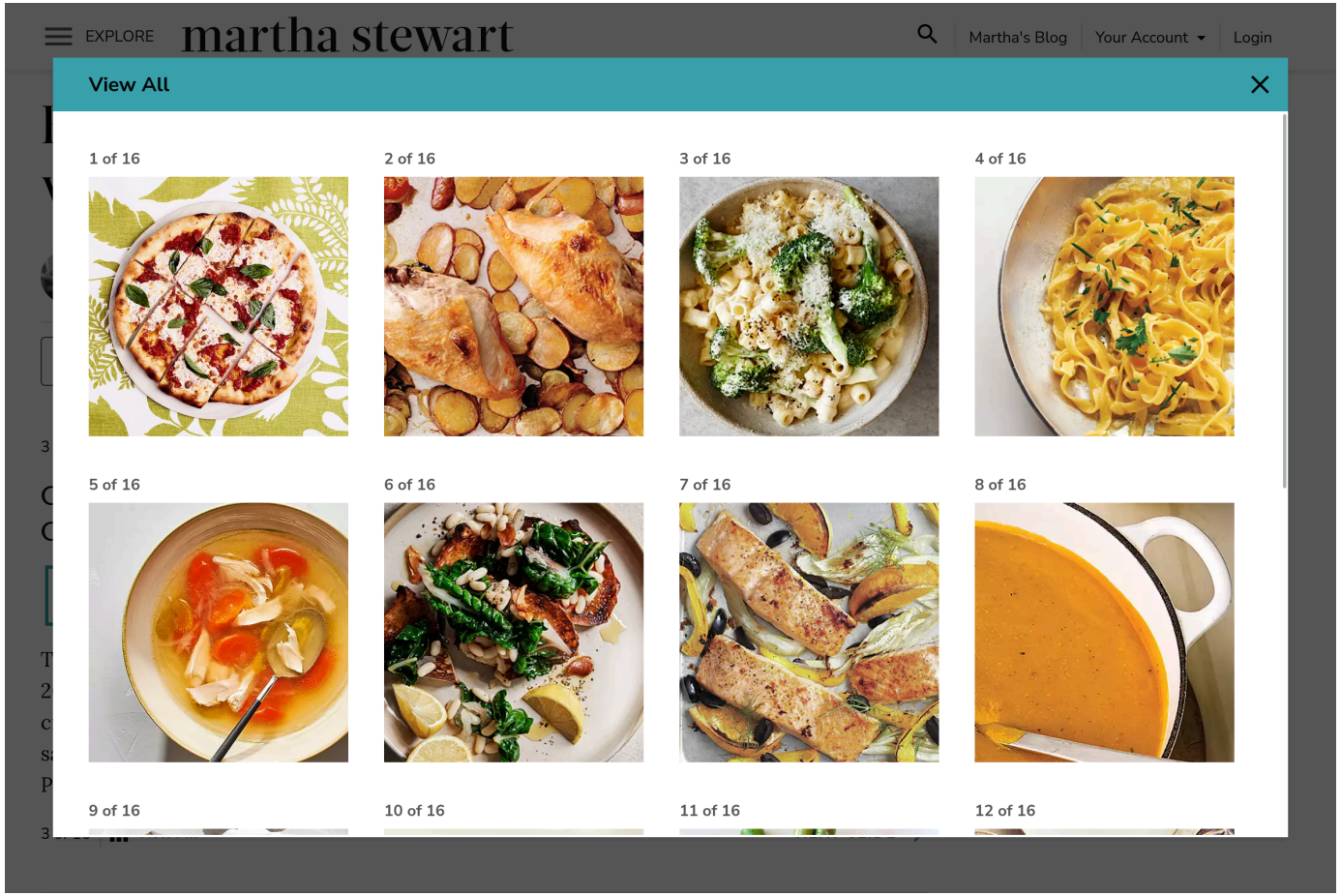
Tip: Would the user have seen this on other websites they visit?

Example: Yes, the hamburger menu is a common pattern for showing/hiding navigation on narrow screens.



Discussion: Design Principles – Modals

- Functional
- Affordances
- Visibility
- Feedback
- Familiarity



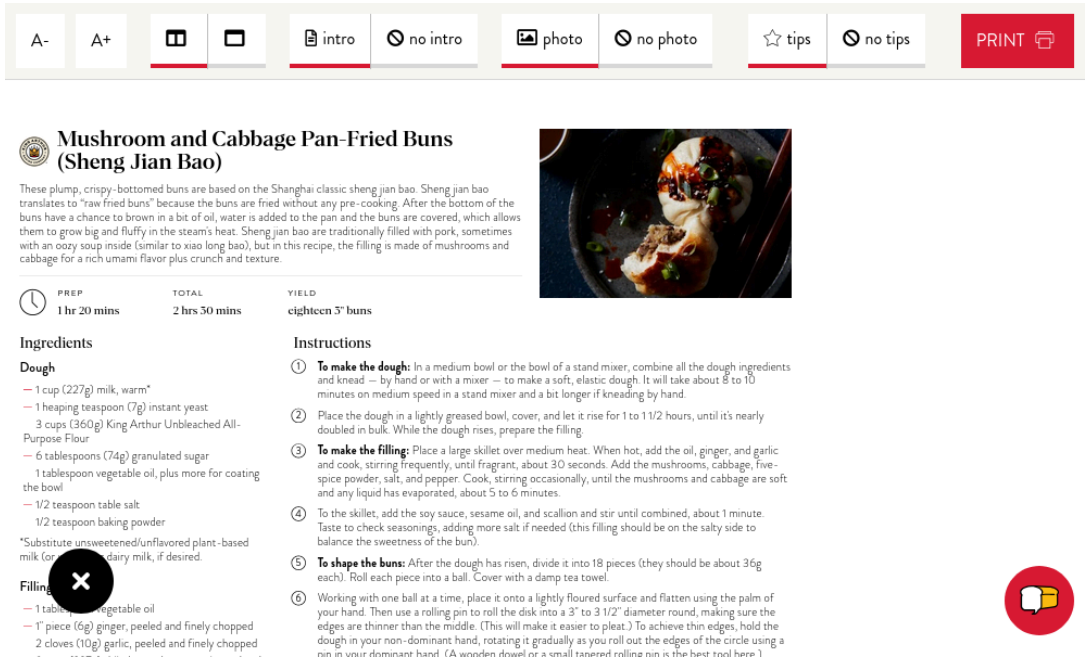
Example: Design Principles – Modals



Example: Adaptable View

Design principles in this context:

- Functional
- Affordances
- Visibility
- Feedback
- Familiarity



Modal to define print view settings

Gotchas: Interactivity Design Gotchas

- Don’t use interactivity to make your site “pop” or show off your skills.
- “Minimalist” or flat designs often fail to provide effective affordances.
- Use animation only if it adds meaning to the interaction (feedback).
- **A website is not an app.** Your site should ***feel* like a website**.
- Start with HTML & CSS and only add interactivity to enhance the user’s experience.

Summary: Designing Usable Static Interactivity

- Static client-side interactivity dynamically changes **existing** HTML and CSS with JavaScript.
- Interactivity should **enhance** the audience's experience and help them accomplish their goals.
- Usable interactivity employs **affordances**, **visibility**, **feedback**, and **familiarity**.
- Avoid interactivity to "wow" or "impress."
- Design interactivity with **sketches + annotations**.

What's Next

Friday sections (10/30): Milestone 2 – Peer Feedback

Monday (11/2):

- Milestone 2 Due
- Milestone 3 Assigned