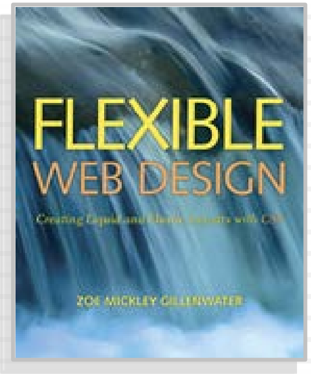
PUTTING FLEXBOX INTO PRACTICE

Blend Conference
September 2013

Zoe Mickley Gillenwater @zomigi

I’m a web designer/front-end dev

and I wrote these books on CSS:



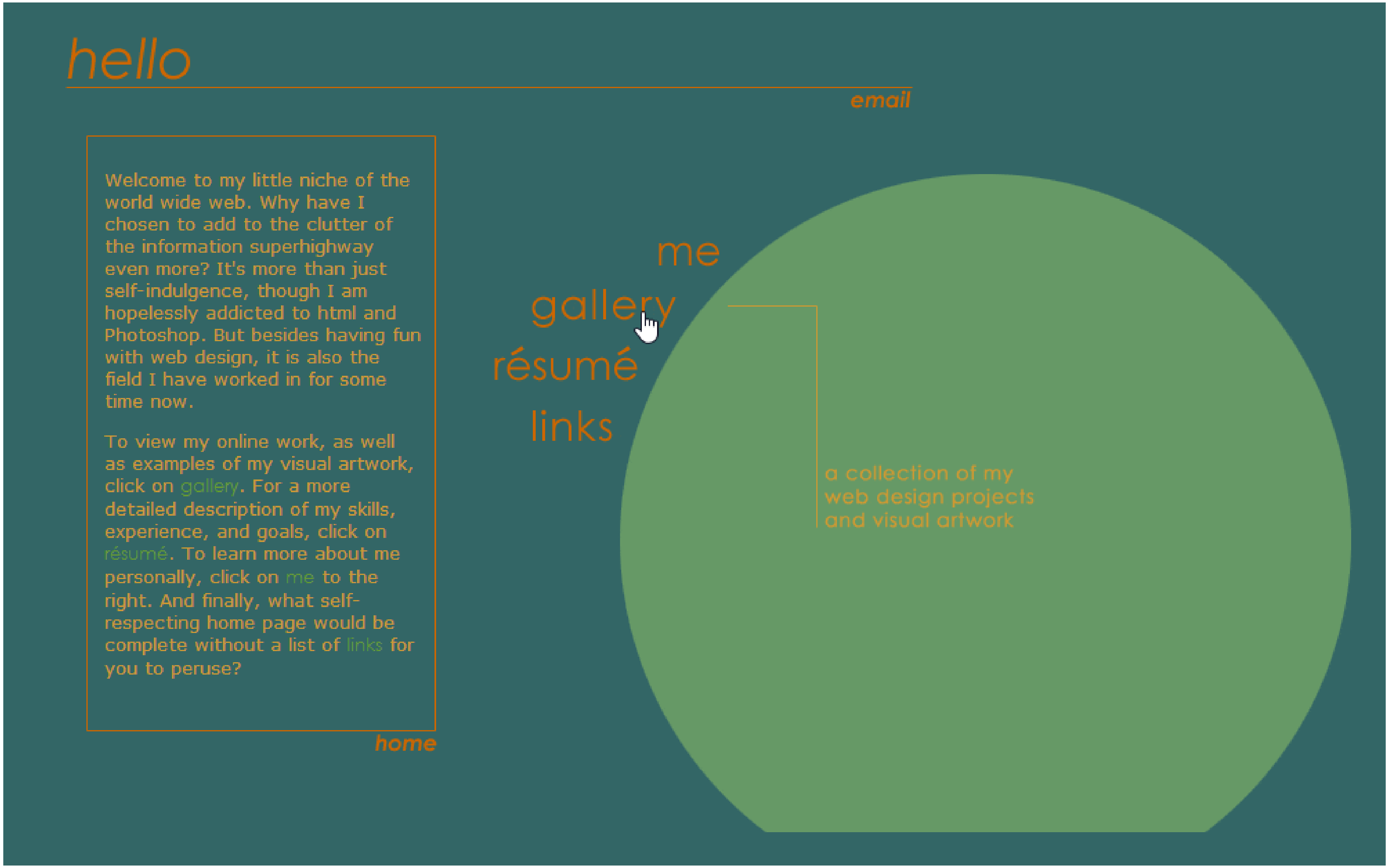
Stunning CSS3:
A Project-based Guide to the Latest in CSS

www.stunningcss3.com

Flexible Web Design:
Creating Liquid and Elastic Layouts with CSS

www.flexiblewebbook.com

My portfolio site from 2000

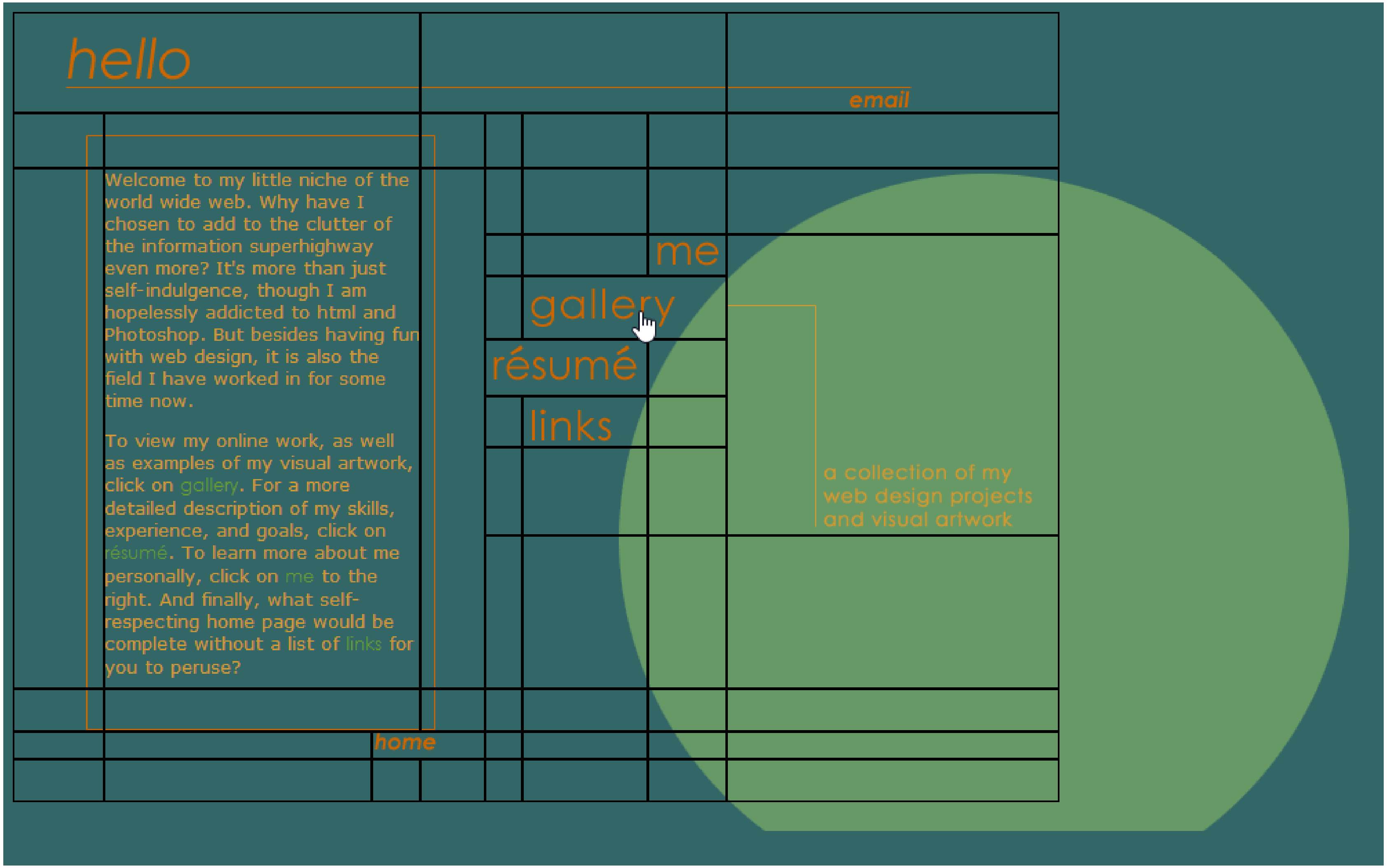


Welcome to my little niche of the world wide web. Why have I chosen to add to the clutter of the information superhighway even more? It's more than just self-indulgence, though I am hopelessly addicted to html and Photoshop. But besides having fun with web design, it is also the field I have worked in for some time now.

To view my online work, as well as examples of my visual artwork, click on gallery. For a more detailed description of my skills, experience, and goals, click on résumé. To learn more about me personally, click on me to the right. And finally, what self-respecting home page would be complete without a list of links for you to peruse?

a collection of my
web design projects
and visual artwork

My portfolio site from 2000



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a collection of my web design projects and visual artwork

2003: Introduced to floats

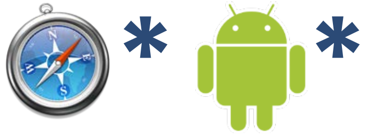
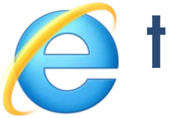
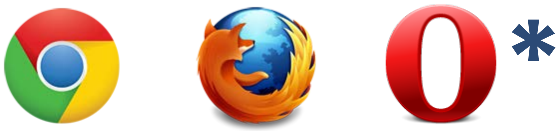
Problems with float layout

- Difficulty with containment
- Wrapping/float drop
- Visual location somewhat tied to HTML order
- No built-in equal-height columns
- No `float:center`

What is flexbox?

The nickname for the CSS Flexible Box Layout Module, a new layout mechanism and box model.

Which is which?

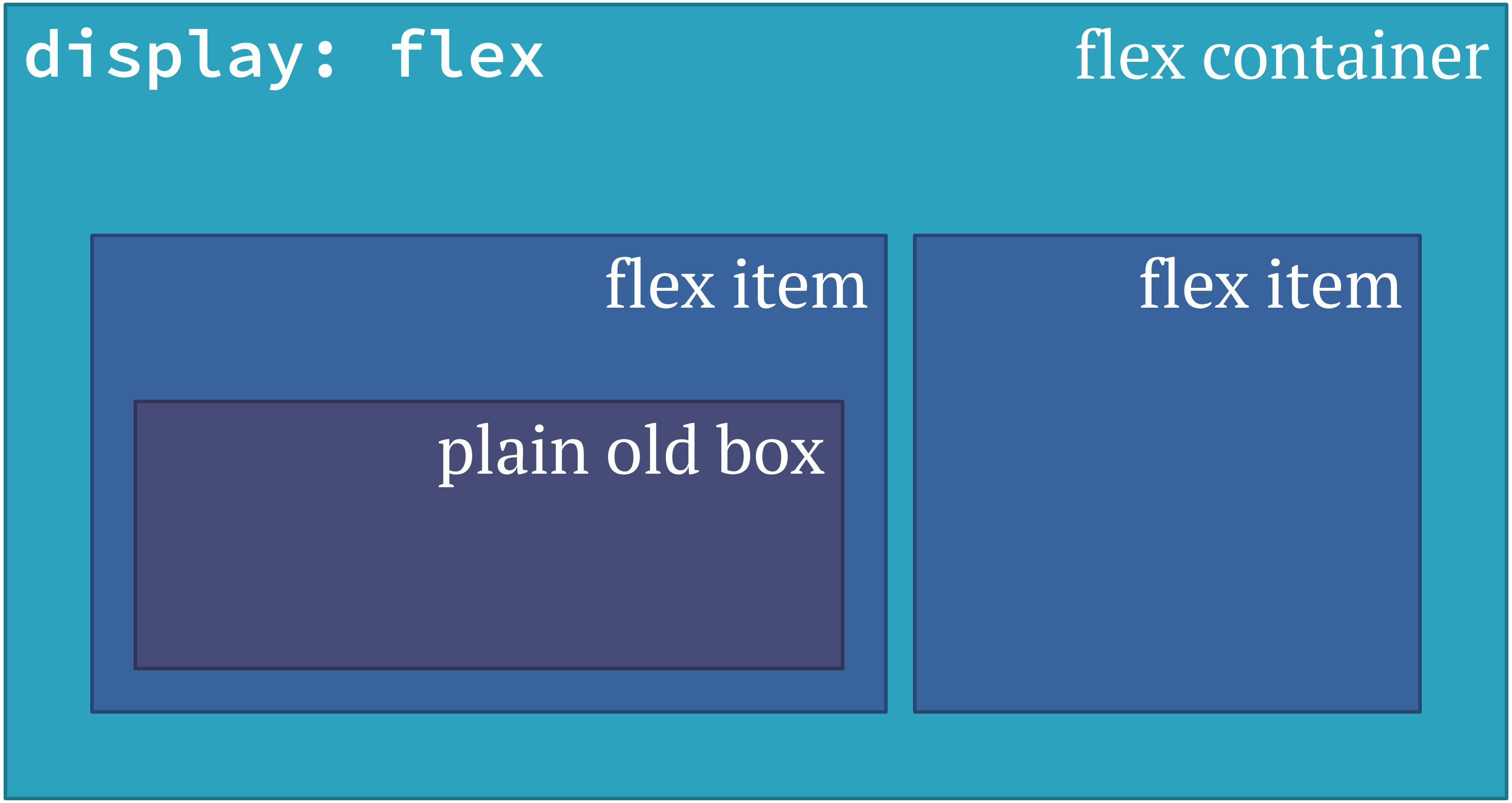
2009	`display:box`	
2011	`display:flexbox`	
Now	`display:flex`	

* with -webkit- prefix

† with -ms- prefix, 10 only

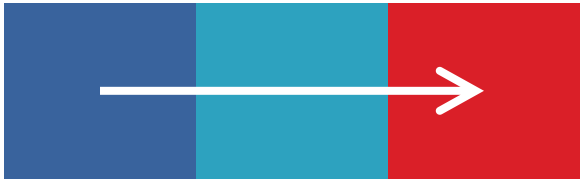
See also http://css-tricks.com/old-flexbox-and-new-flexbox/

Turn it on

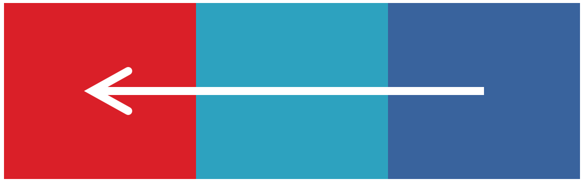

display: flex
flex container
flex item
plain old box
flex item

flex-direction

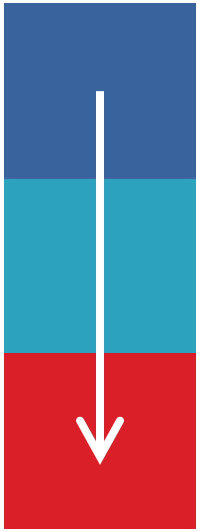
specifies orientation
of flex items’ layout



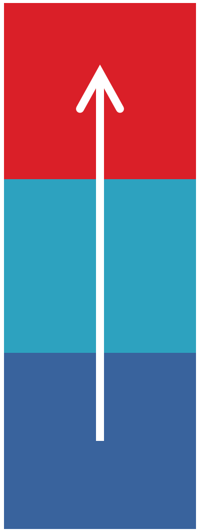
`row`
(default)



`row-reverse`



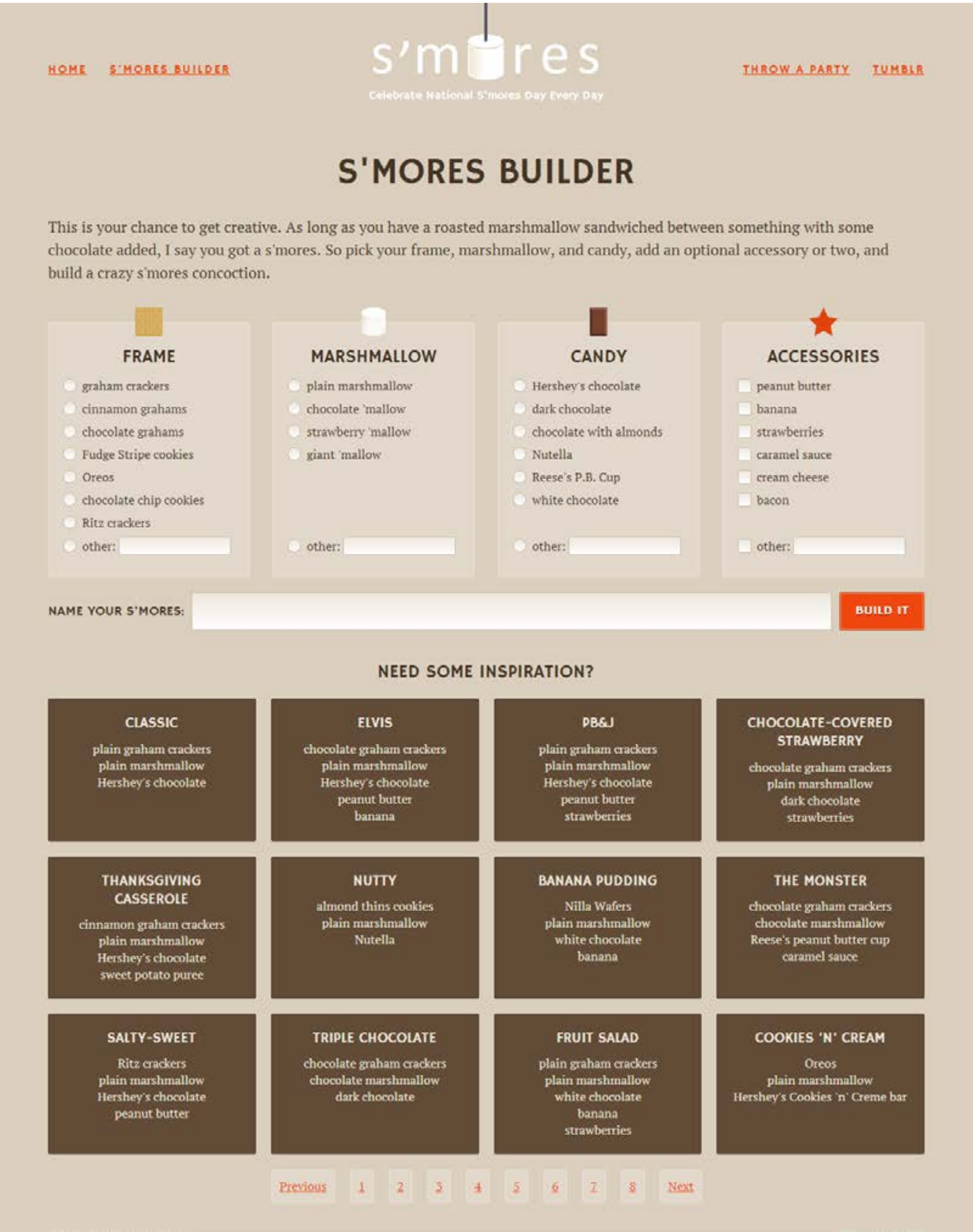
`column`



`column-reverse`

Demo site:

Visit
www.smoresday.us
using Chrome,
Opera, or IE 10 for
full effect



HOME S'MORES BUILDER

s'mores

Celebrate National S'mores Day Every Day

THROW A PARTY TUMBLR

S'MORES BUILDER

This is your chance to get creative. As long as you have a roasted marshmallow sandwiched between something with some chocolate added, I say you got a s'mores. So pick your frame, marshmallow, and candy, add an optional accessory or two, and build a crazy s'mores concoction.

FRAME

○ graham crackers
○ cinnamon grahams
○ chocolate grahams
○ Fudge Stripe cookies
○ Oreos
○ chocolate chip cookies
○ Ritz crackers
○ other:

MARSHMALLOW

○ plain marshmallow
○ chocolate 'mallow
○ strawberry 'mallow
○ giant 'mallow
○ other:

CANDY

○ Hershey's chocolate
○ dark chocolate
○ chocolate with almonds
○ Nutella
○ Reese's P.B. Cup
○ white chocolate
○ other:

ACCESSORIES

□ peanut butter
□ banana
□ strawberries
□ caramel sauce
□ cream cheese
□ bacon
□ other:

NAME YOUR S'MORES:

BUILD IT

NEED SOME INSPIRATION?

CLASSIC
plain graham crackers
plain marshmallow
Hershey's chocolate

ELVIS
chocolate graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
banana

PB&J
plain graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
strawberries

CHOCOLATE-COVERED STRAWBERRY
chocolate graham crackers
plain marshmallow
dark chocolate
strawberries

THANKSGIVING CASSEROLE
cinnamon graham crackers
plain marshmallow
Hershey's chocolate
sweet potato puree

NUTTY
almond thins cookies
plain marshmallow
Nutella

BANANA PUDDING
Nilla Wafers
plain marshmallow
white chocolate
banana

THE MONSTER
chocolate graham crackers
chocolate marshmallow
Reese's peanut butter cup
caramel sauce

SALTY-SWEET
Ritz crackers
plain marshmallow
Hershey's chocolate
peanut butter

TRIPLE CHOCOLATE
chocolate graham crackers
chocolate marshmallow
dark chocolate

FRUIT SALAD
plain graham crackers
plain marshmallow
white chocolate
banana
strawberries

COOKIES 'N' CREAM
Oreos
plain marshmallow
Hershey's Cookies 'n' Creme bar

Previous 1 2 3 4 5 6 7 8 Next

Demo: horizontal navigation

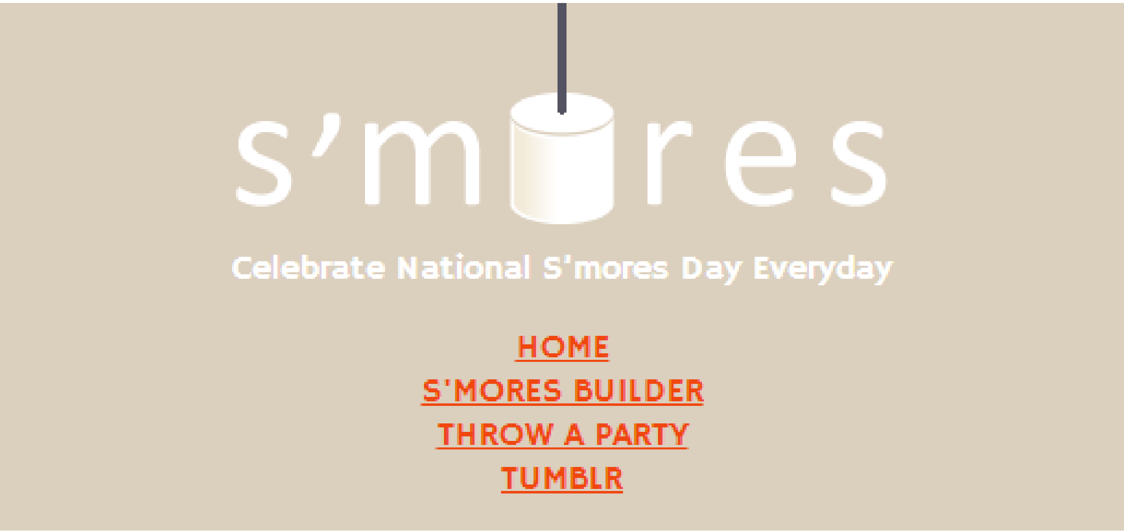
1. Turn `<ul>` into flex container:

```
.list-nav {
  display: flex;
  flex-direction: row; /* default */
}
```

2. Children `<li>` become flex items laid out on single horizontal line

Demo: horizontal navigation

Before



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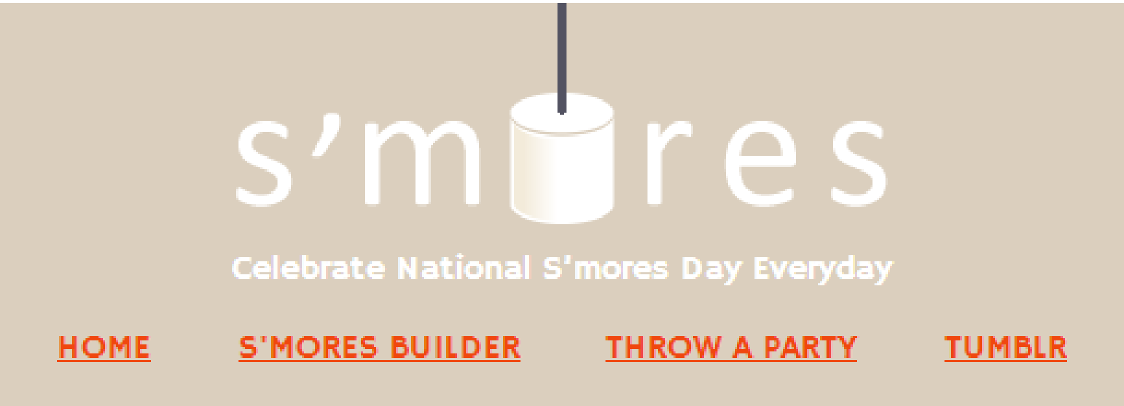
HOME
S'MORES BUILDER
THROW A PARTY
TUMBLR

After



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HOME S'MORES BUILDER THROW A PARTY TUMBLR

“What’s the big deal?

I can do the same thing with display: inline.”

Yes, you can.

We’re just laying the groundwork for the cool stuff that’s coming.

Baby steps.

How the CSS might really look

```
.list-nav {
  display: -webkit-box;
  display: -ms-flexbox;
  display: -webkit-flex;
  display: flex;
  -webkit-box-direction: normal;
  -webkit-box-orient: horizontal;
  -ms-flex-direction: row;
  -webkit-flex-direction: row;
  flex-direction: row;
}
```

2009

2011

current

Keeping track of variants

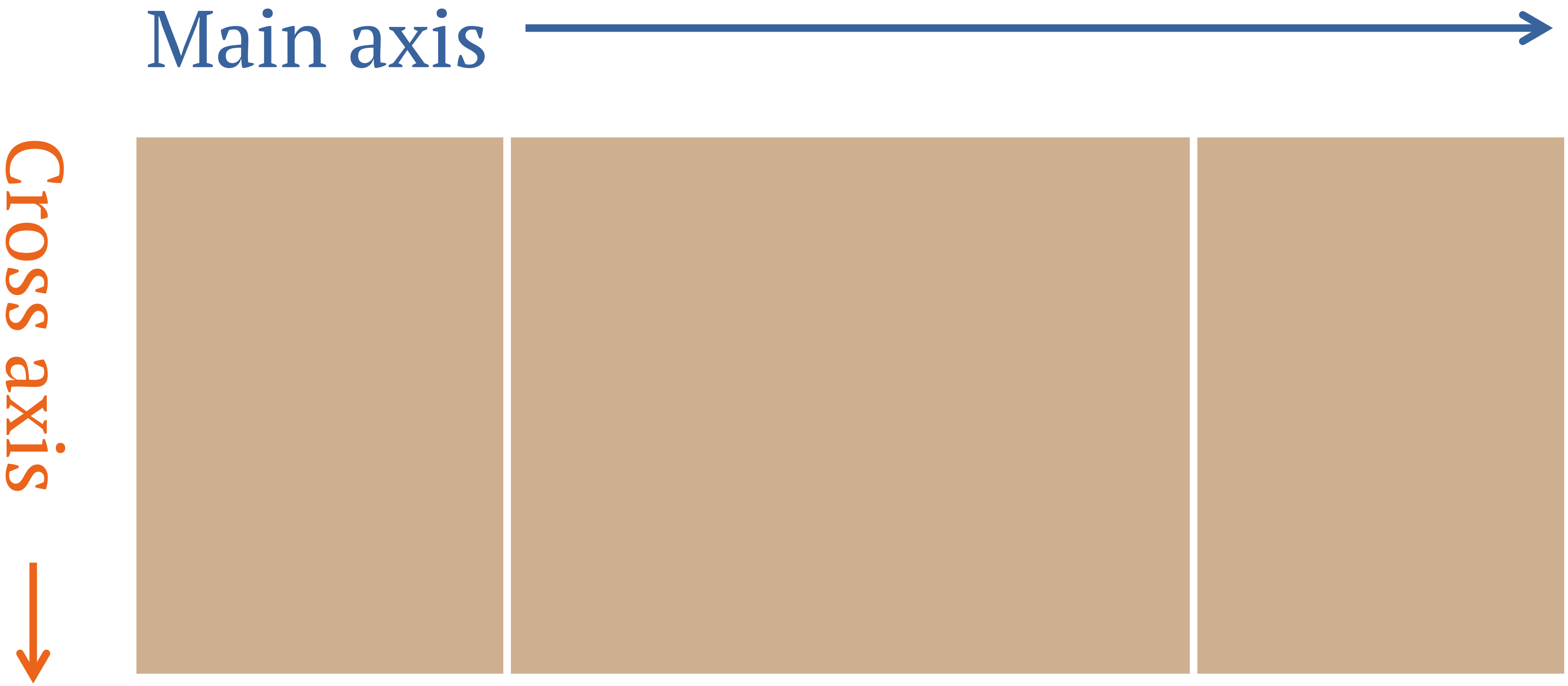
- Flexy Boxes code generator shows old and new syntaxes: www.the-echoplex.net/flexyboxes/
- Let Sass or LESS do it for you, for instance:
  - https://github.com/mastastealth/sass-flex-mixin
  - https://gist.github.com/cimmanon/4461470
- The -prefix-free script can do some of it for you: http://leaverou.github.io/prefixfree/

Use the variants you want.

But for the sake of readability, I’m omitting them from the code samples on these slides. You can see them in the live demo.

Now back to `flex-direction`.

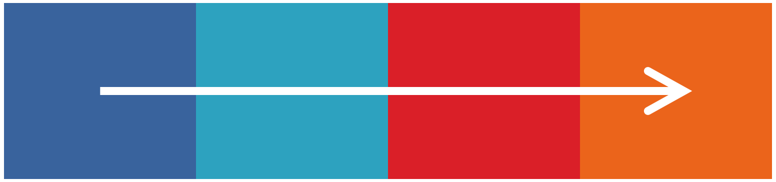
Setting a point of reference



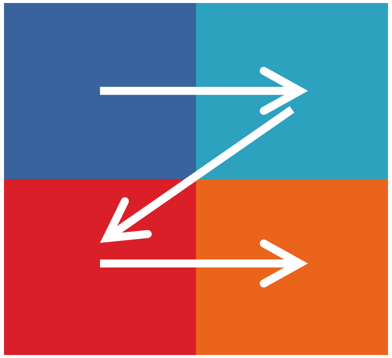
(for `flex-direction: row`)

flex-wrap

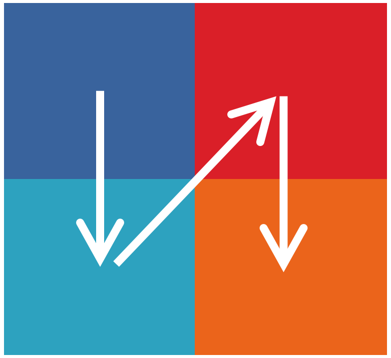
controls whether flex items can lay out on multiple lines and which direction new lines are stacked in



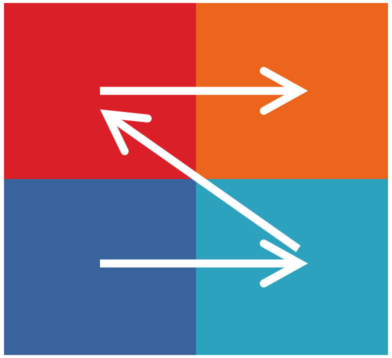
`nowrap`
(default; for row)



`wrap`
(for row)



`wrap`
(for column)



`wrap-reverse`
(for row)

Problems with flex-wrap

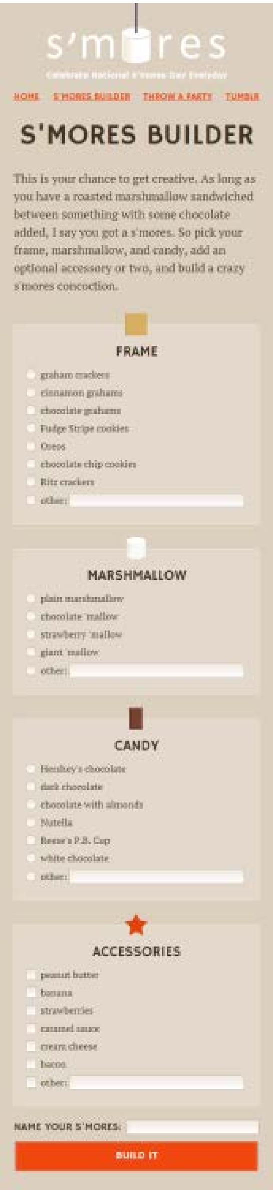
- Firefox doesn’t support it yet
- No browser supports 2009 equivalent `box-lines` property
- Limited control of where breaks occur without support for `break-before`/`break-after` properties (only IE 10 and Opera support them)

Summary: setting the stage

1. Create flex container using `display:flex`
2. Set its `flex-direction` to control orientation (horizontal or vertical)
3. Set its `flex-wrap` to control whether and in which direction to wrap

   (Or, set `flex-flow` as shorthand for `flex-direction` and `flex-wrap`)

Mobile block layout



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FRAME

○ graham crackers
○ cinnamon grahams
○ chocolate grahams
○ Fudge Stripe cookies
○ Oreos
○ chocolate chip cookies
○ Ritz crackers
○ other:

MARSHMALLOW

○ plain marshmallow
○ chocolate 'mallow
○ strawberry 'mallow
○ giant 'mallow
○ other:

CANDY

○ Hershey's chocolate
○ dark chocolate
○ chocolate with almonds
○ Nutella
○ Reese's P.B. Cup
○ white chocolate
○ other:

ACCESSORIES

□ peanut butter
□ banana
□ strawberries
□ caramel sauce
□ cream cheese
□ bacon
□ other:

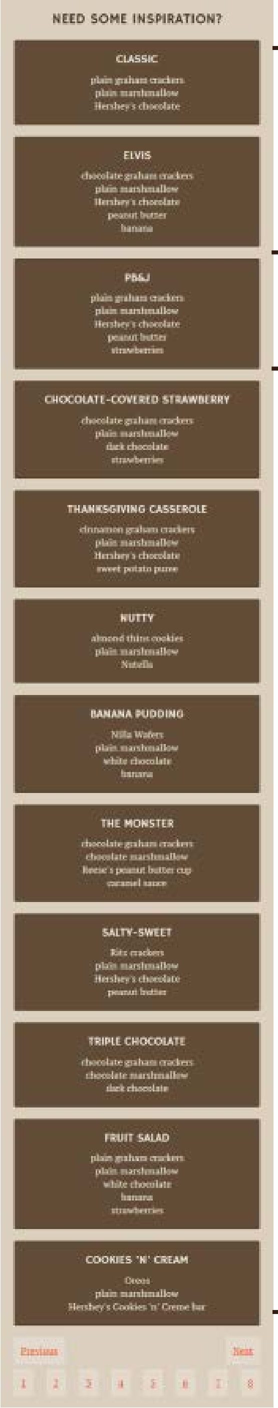
NAME YOUR S'MORES:

BUILD IT

.builder

.component

.action



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white chocolate
banana
strawberries

COOKIES 'N' CREAM
Oreos
plain marshmallow
Hershey's Cookies 'n' Creme bar

Previous Next

1 2 3 4 5 6 7 8

.gallery

.gallery-item

Add flexbox for larger widths

No need to put within media query—it can “kick in” whenever space allows (auto breakpoints!)

1. Create flex container:

```
.gallery {
  display: flex;
  flex-wrap: wrap;
  margin-left: -20px;
}
```

Add flexbox for larger widths

2. Size flex items:

```
.gallery-item {
  flex: 1 0 200px;
  margin: 0 0 20px 20px;
  padding: 20px;
}
```

The flex property

This is where flexbox gets flexible.

And kinda confusing.

Defining the flex property

- Makes flex items change their width or height (whichever is dimension along main axis) to fit available space
- Shorthand for 3 properties:
  - `flex-grow`
  - `flex-shrink`
  - `flex-basis`

Defining the flex property

`flex-grow`

how much flex item will grow relative to other items if extra space is available (proportion of extra space that it gets)

`flex-shrink`

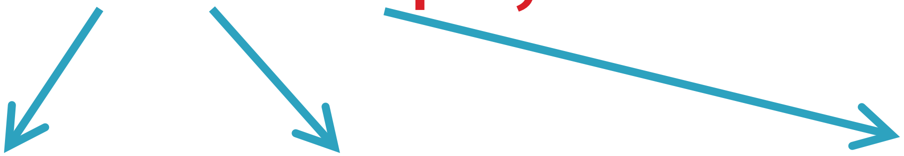
how much item will shrink relative to others if there is not enough space (proportion of overflow that gets shaved off)

`flex-basis`

the initial starting size before free space is distributed (any standard width/height value, including `auto`)

Breaking it down

```
.gallery-item {
  flex: 1 0 200px;
```



`flex-grow`

give every item 1 share of extra width

`flex-shrink`

don’t let the items shrink at all (but they wouldn’t anyway due to `flex-wrap`)

`flex-basis`

start them out at 200 pixels wide (basically, min-width)

Let’s see it flex live

Single-digit flex values

- Common to see `flex: 1` in demos
- `flex: [number]` is equivalent to `flex: [number] 1 0px`
- Be sure you really want `flex-basis` to be `0`
  - When wrap on, essentially min-width
  - 0px therefore means items can shrink to 0px
  - If everything can get down to 0px, nothing ever has a reason to wrap

My first attempt

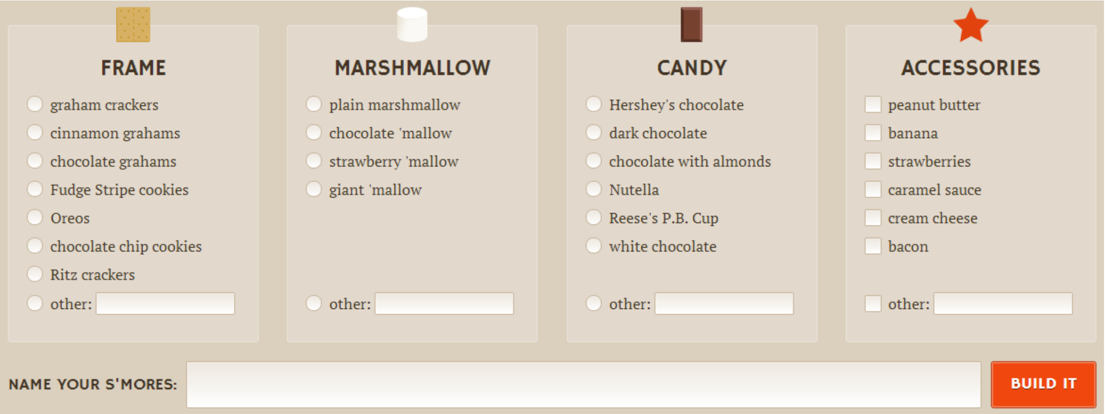
Zoe's Brain Said:

"Since .action starts out at 100%, it won't have space to sit on the first line with the content preceding it, and will wrap to a second line."

```
.component {
  flex: 1;
}
```

```
.action {
  flex: 1 1 100%;
}
```

The expected outcome:



FRAME

○ graham crackers
○ cinnamon grahams
○ chocolate grahams
○ Fudge Stripe cookies
○ Oreos
○ chocolate chip cookies
○ Ritz crackers
○ other:

MARSHMALLOW

○ plain marshmallow
○ chocolate 'mallow
○ strawberry 'mallow
○ giant 'mallow
○ other:

CANDY

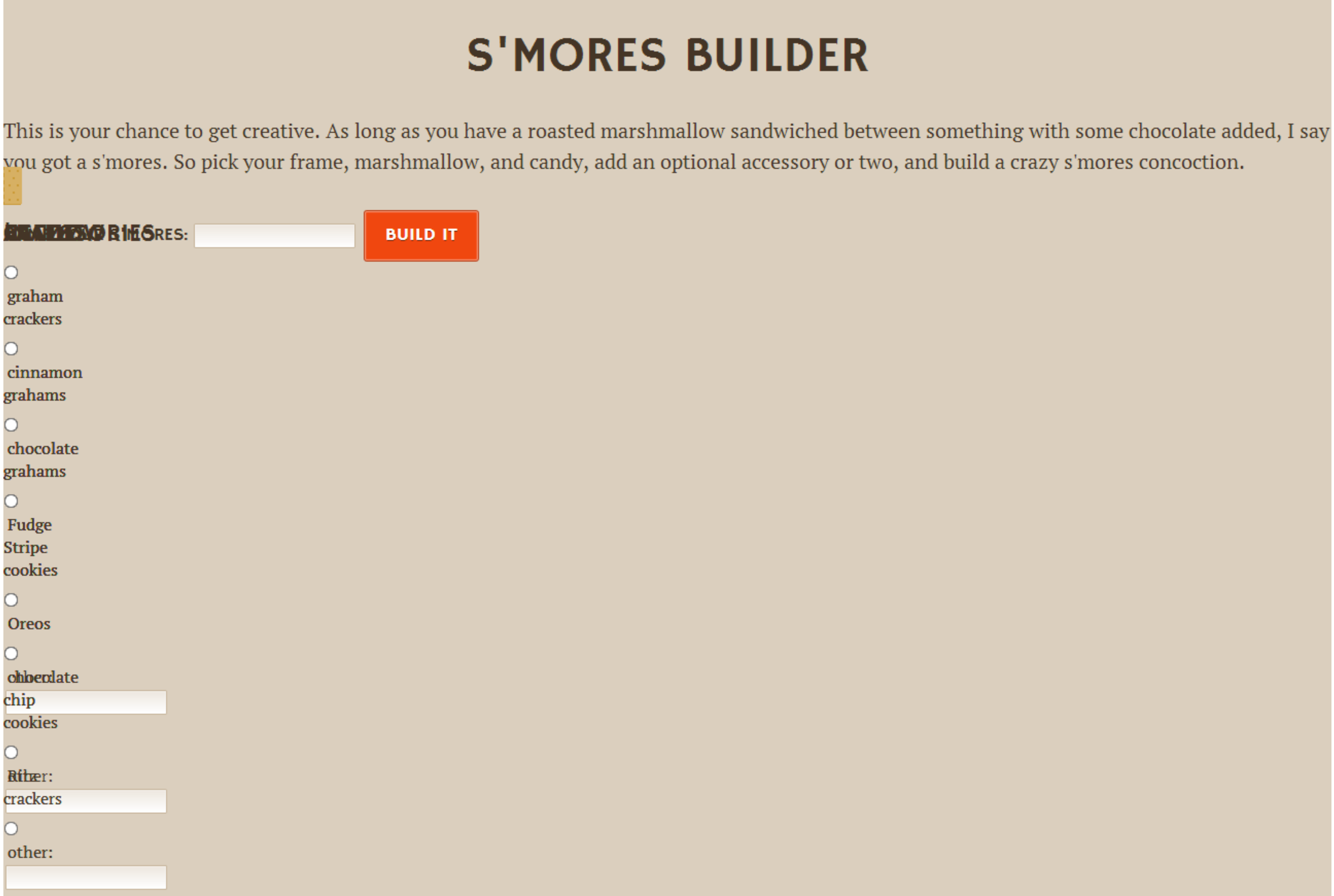
○ Hershey's chocolate
○ dark chocolate
○ chocolate with almonds
○ Nutella
○ Reese's P.B. Cup
○ white chocolate
○ other:

ACCESSORIES

□ peanut butter
□ banana
□ strawberries
□ caramel sauce
□ cream cheese
□ bacon
□ other:

NAME YOUR S'MORES:

Flexbox fail



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[illegible]RES:

○ graham crackers

○ cinnamon grahams

○ chocolate grahams

○ Fudge Stripe cookies

○ Oreos

○ chocolate chip cookies

○ Ritz crackers

○ other:

My first attempt

Reality:

Since it’s fine for each .component to shrink to only 0px wide, a 100% wide element can and will sit on the same line as all the components.

```
.component {
   flex: 1 1 0px;
}
.action {
   flex: 1 1 100%;
}
```

Forcing the wrap

Fixed:

.action will always wrap to new line, and .components will wrap to additional lines when there's less than their combined flex-basis values (plus margin, etc.).

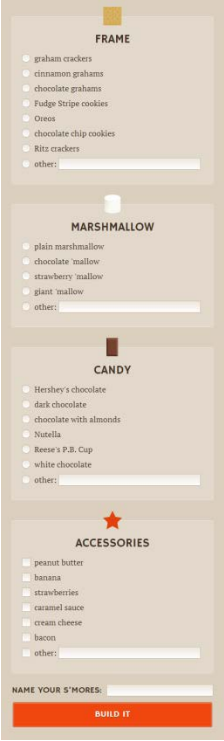
```
.component {
  flex: 1 1 200px;
}
.action {
  flex: 1 1 100%;
}
```

Live demo time again

Why flex is great

Less need for media queries

Layout changes that would previously have been hardcoded into a media query can now be done on the fly when browser determines stuff can fit



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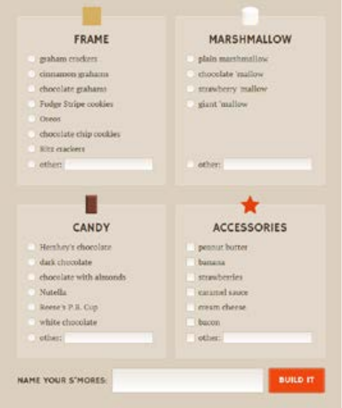

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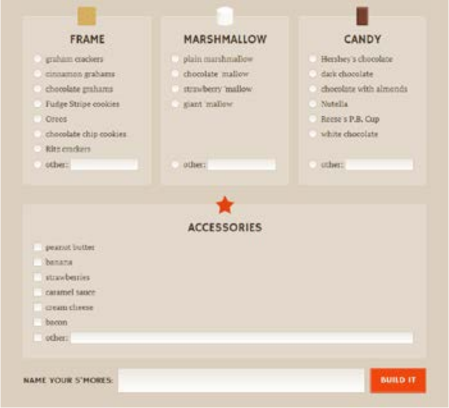

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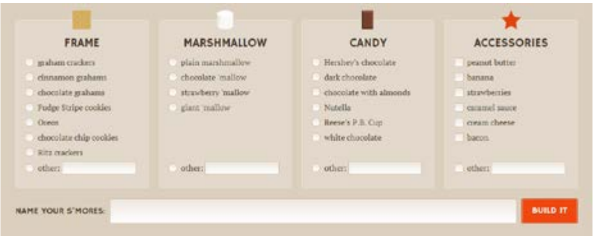

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NAME YOUR S'MORES:

Flex adjusts for margin

`box-sizing` only takes care of padding and border added on to width, not margin

The boxes won’t all fit

```
.component {
  width: 25%;
  margin-left: 20px;
}
```

Works like a charm

```
.component {
  flex: 1 1 200px;
  margin-left: 20px;
}
```

Flex adjusts for quantity of items

- Great for sites with dynamic or frequently changing content blocks, e.g.:
  - News stories on home page vs inner page
  - Product or feature tiles
  - Pricing page with plans side by side
- Makes HTML/CSS more modular—an item can move anywhere and adjust in size as needed

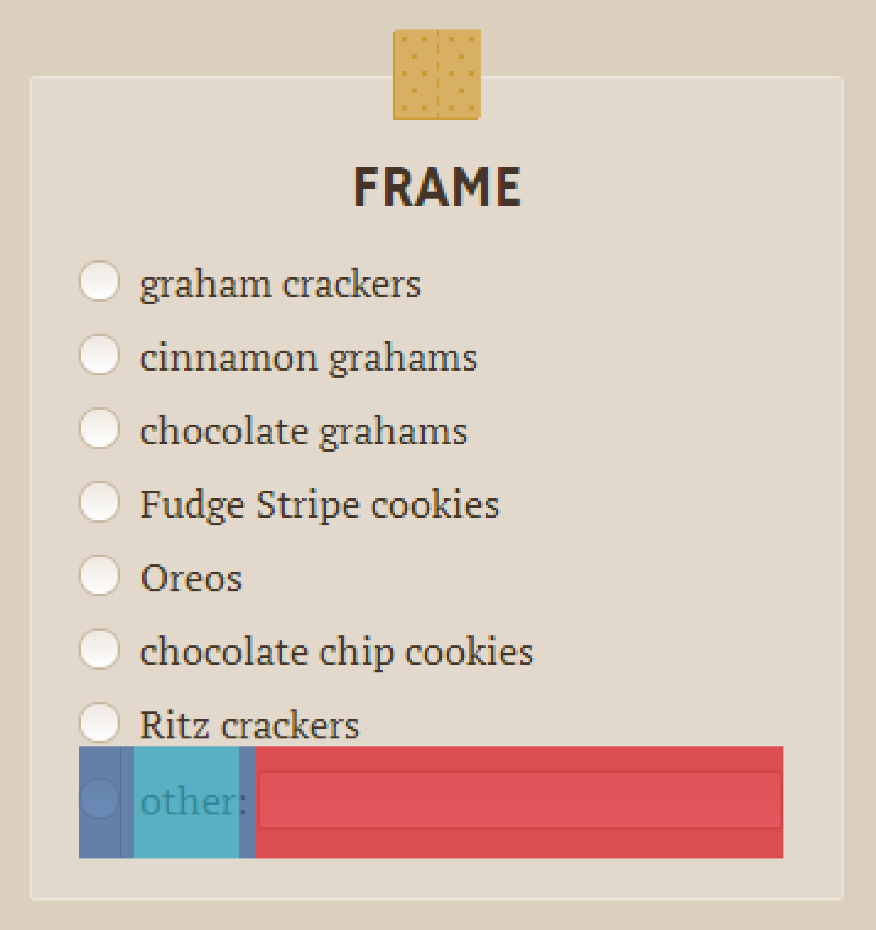
Flex can combine different units

Items measured in different units can sit side-by-side and all fit perfectly

🟦 Pixels

🟦 Ems

🟥 Mystery percentage



FRAME

○ graham crackers

○ cinnamon grahams

○ chocolate grahams

○ Fudge Stripe cookies

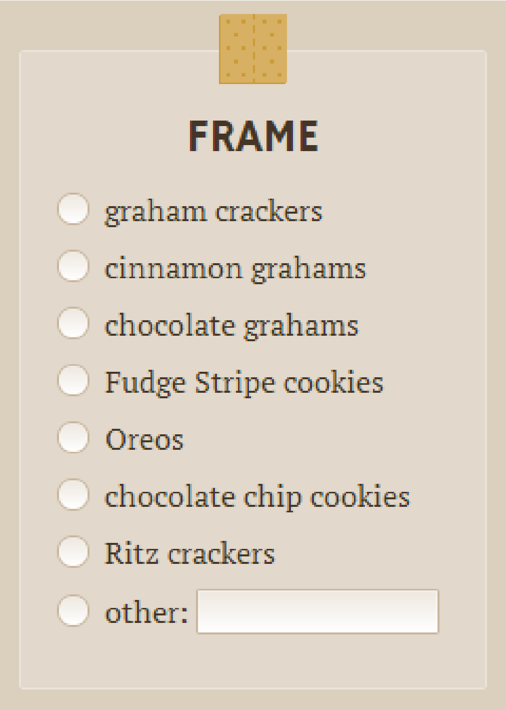
○ Oreos

○ chocolate chip cookies

○ Ritz crackers

○ other:

Flex can combine different units

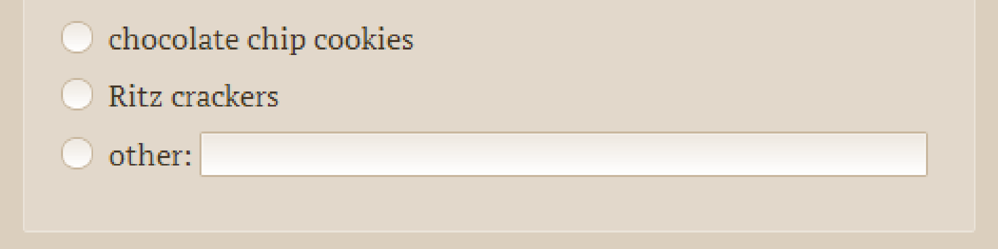


FRAME

○ graham crackers
○ cinnamon grahams
○ chocolate grahams
○ Fudge Stripe cookies
○ Oreos
○ chocolate chip cookies
○ Ritz crackers
○ other:

Set only the text field to flex:

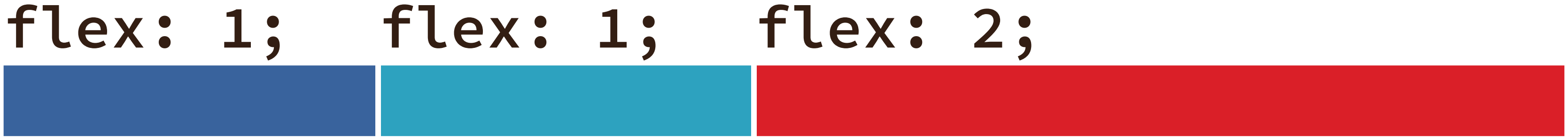
```
.component li:last-child {
  display: flex;
}
.component .other-name {
  flex: 1;
}
```



○ chocolate chip cookies
○ Ritz crackers
○ other:

Flex can be proportional

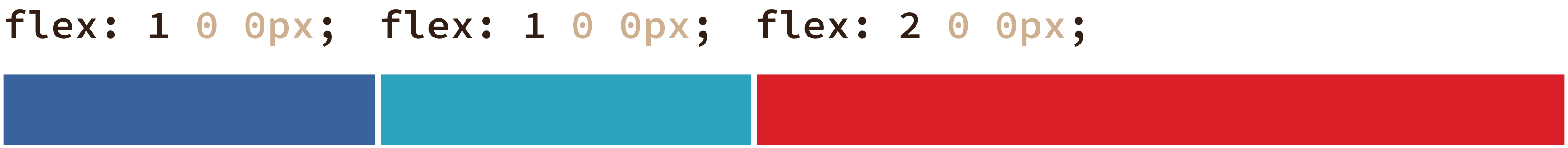
Setting `flex-grow`/`flex-shrink` to different values can make flex items size themselves relative to each other



`flex: 1;` `flex: 1;` `flex: 2;`

But be careful!

Having widths be in multiples of each other only works if `flex-basis` is `0`



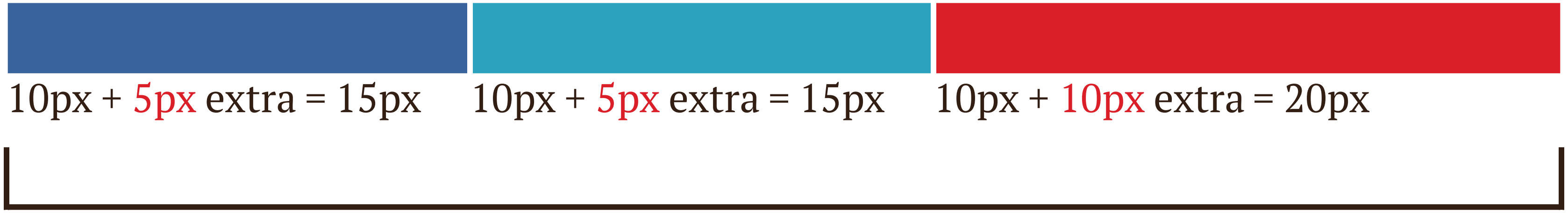
```
flex: 1 0 0px;  flex: 1 0 0px;  flex: 2 0 0px;
```

If all start out 0px, then **all** the width on the line is extra, so the `flex:2` item gets twice as much width as the others and is thus twice as wide as the others

If flex-basis isn’t 0px…

…the widths may not end up as you expect

`flex: 1 0 10px;` `flex: 1 0 10px;` `flex: 2 0 10px;`



10px + 5px extra = 15px

10px + 5px extra = 15px

10px + 10px extra = 20px

if 50px available

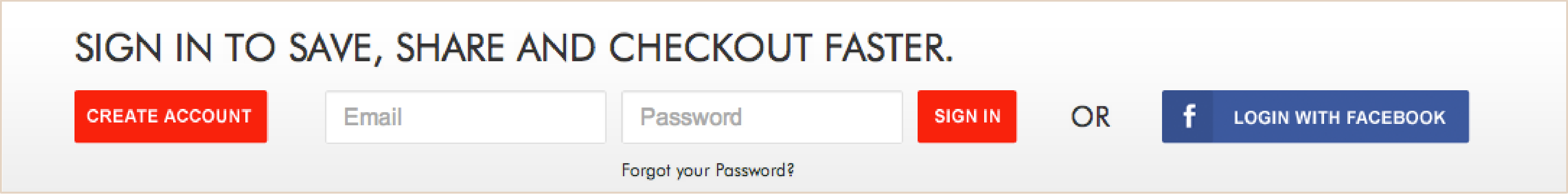
The third box gets twice as much of the **extra**, but that doesn’t make it twice as wide **overall**

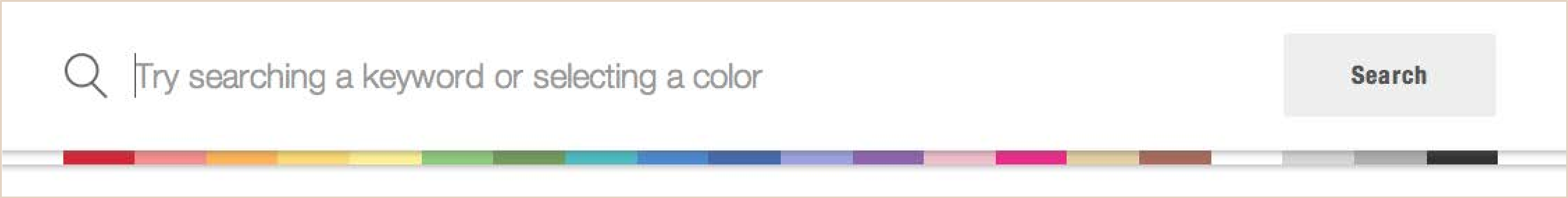
You can use it now

While support improves, consider using flexbox now on small page components as progressive enhancement.

Here are a few ideas.

Single-line, full-width form

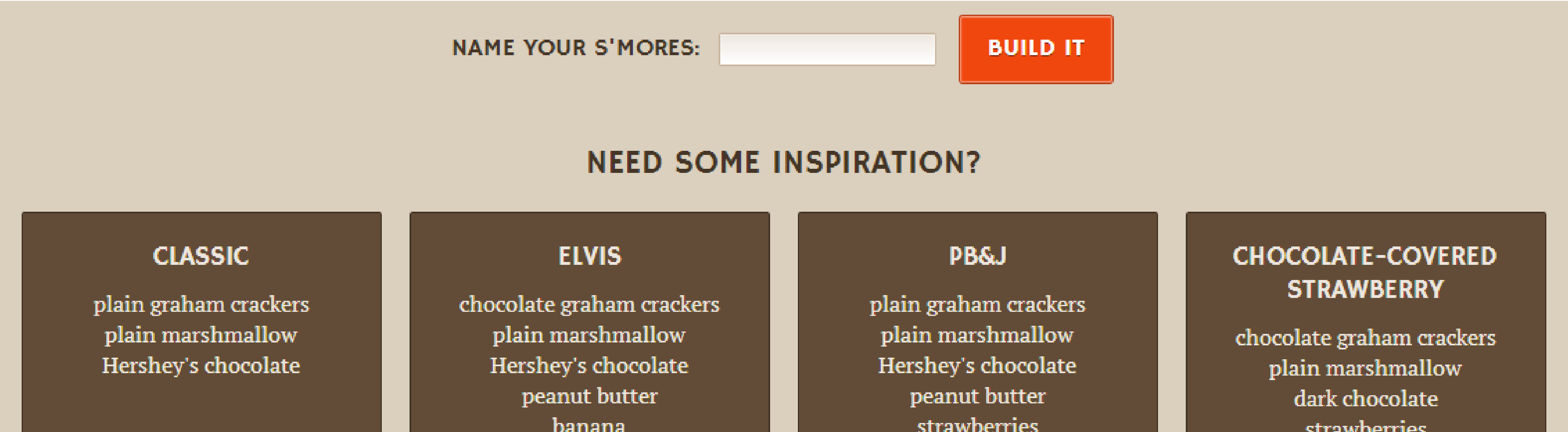

SIGN IN TO SAVE, SHARE AND CHECKOUT FASTER.



- □ All items on same line
- □ Text input(s) stretches to fill remaining space
- □ All items vertically centered or equal height

Form without flexbox

```
.action { text-align: center; }
.action * {
  display: inline; /* default */
  vertical-align: middle;
}
```



NEED SOME INSPIRATION?

CLASSIC

plain graham crackers
plain marshmallow
Hershey's chocolate

ELVIS

chocolate graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
banana

PB&J

plain graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
strawberries

CHOCOLATE-COVERED STRAWBERRY

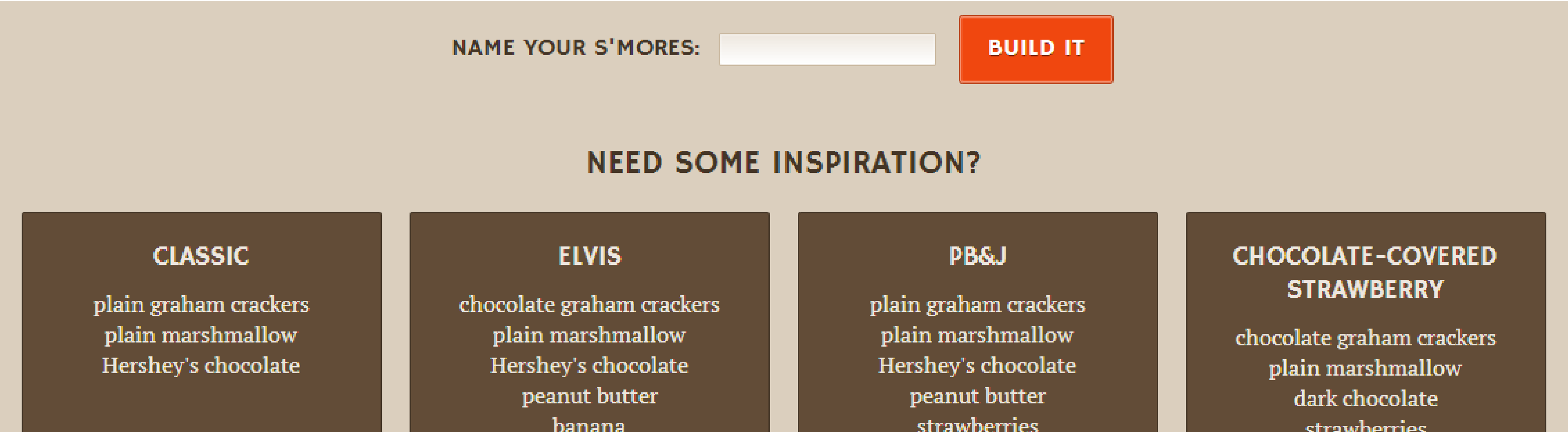
chocolate graham crackers
plain marshmallow
dark chocolate
strawberries

Form without flexbox

✓ All items on same line

X Text input stretches to take up remaining space

✓ All items vertically centered or equal height



NEED SOME INSPIRATION?

CLASSIC

plain graham crackers
plain marshmallow
Hershey's chocolate

ELVIS

chocolate graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
banana

PB&J

plain graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
strawberries

CHOCOLATE-COVERED STRAWBERRY

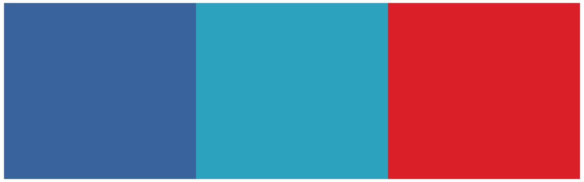
chocolate graham crackers
plain marshmallow
dark chocolate
strawberries

Form with flexbox

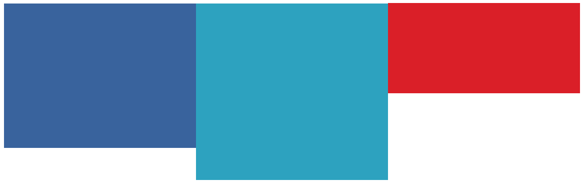
```
.action {
  flex: 1 1 100%;
  display: flex;
  align-items: stretch; /* default */
}
.action input {
  flex: 1;
}
.action input, .action label {
  margin-right: 10px;
}
```

align-items

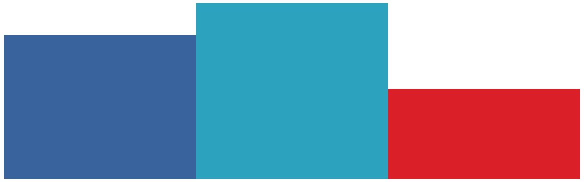
aligns flex items in cross axis



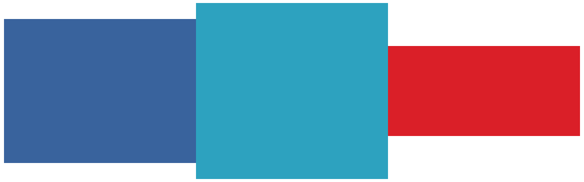
`stretch`
(default)



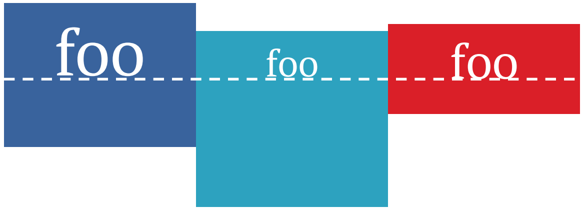
`flex-start`



`flex-end`



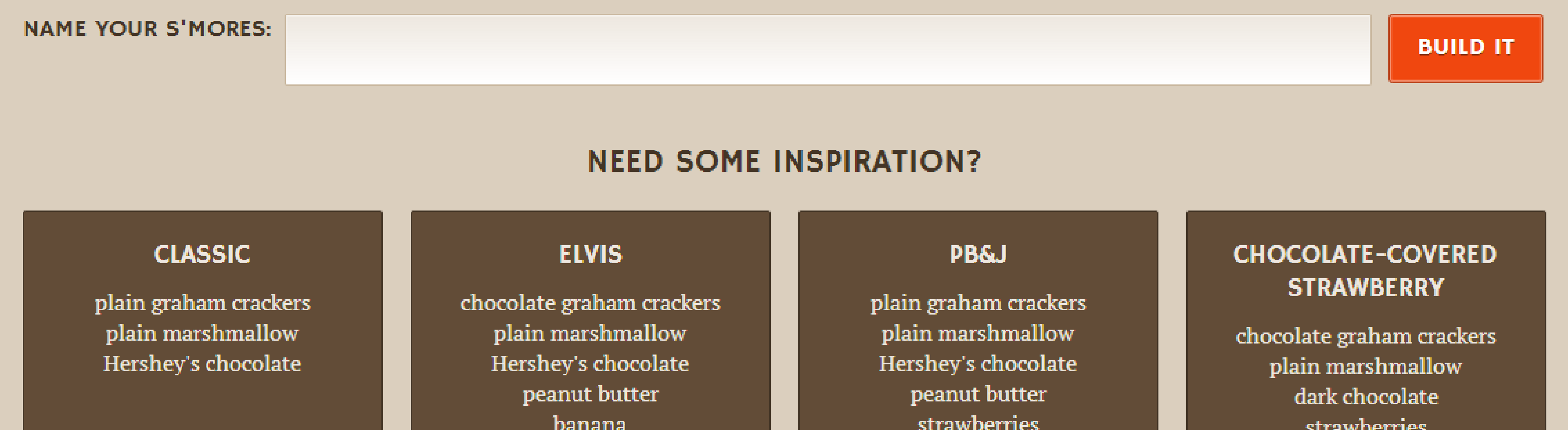
`center`



`baseline`

Form with flexbox

- ✓ All items on same line
- ✓ Text input stretches to take up remaining space
- ✓ All items vertically centered or equal height



NEED SOME INSPIRATION?

CLASSIC
plain graham crackers
plain marshmallow
Hershey's chocolate

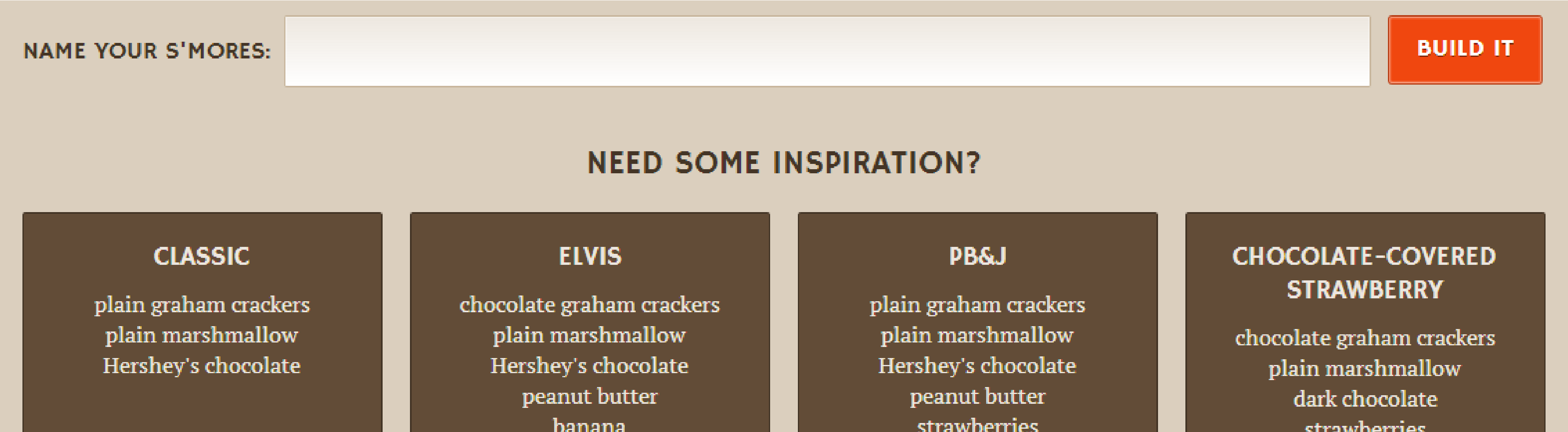
ELVIS
chocolate graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
banana

PB&J
plain graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
strawberries

CHOCOLATE-COVERED STRAWBERRY
chocolate graham crackers
plain marshmallow
dark chocolate
strawberries

Override alignment on label

```
.action label {
  align-self: center;
}
```



NAME YOUR S'MORES:

NEED SOME INSPIRATION?

CLASSIC

plain graham crackers
plain marshmallow
Hershey's chocolate

ELVIS

chocolate graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
banana

PB&J

plain graham crackers
plain marshmallow
Hershey's chocolate
peanut butter
strawberries

CHOCOLATE-COVERED STRAWBERRY

chocolate graham crackers
plain marshmallow
dark chocolate
strawberries

Combine the two

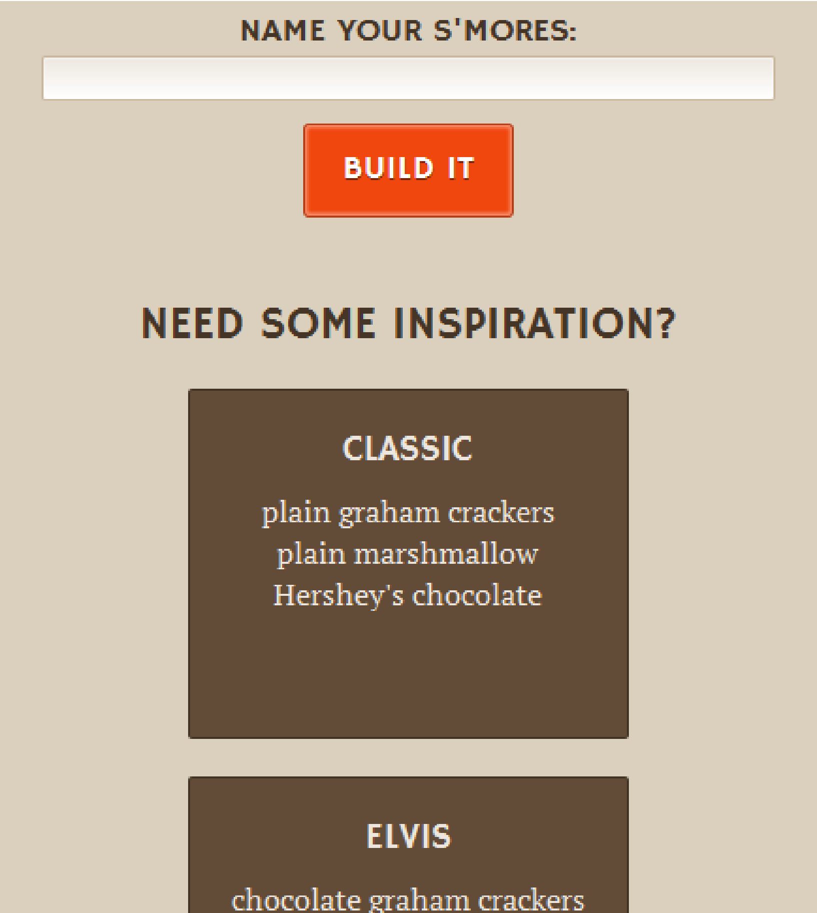
```
.action {
  flex: 1 1 100%;
  display: flex;
  text-align: center; /* fallback */
}
.action input {
  flex: 1;
}
.action label {
  align-self: center;
}
.action input, .action label {
  margin-right: 10px;
}
```

Another option: stack, center

```
.action {
  flex: 1 1 100%;
  display: flex;
  flex-wrap: wrap;
  align-items: center;
  text-align: center; /* fallback */
}
.action input {
  flex: 1;
  display: block; /* fallback */
  width: 100%; /* fallback */
  box-sizing: border-box; /* fallback */
}
.action button {
  flex: 1 1 100%;
  margin-top: 10px;
}
```

Narrow version

Non-flexbox fallback version



NAME YOUR S'MORES:

NEED SOME INSPIRATION?

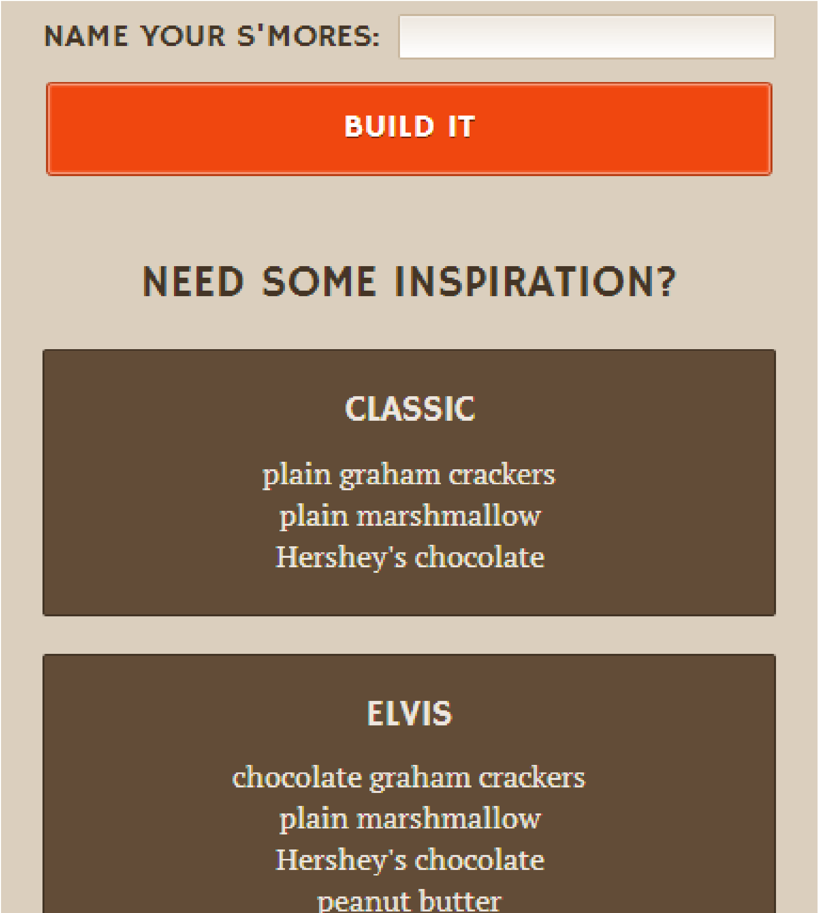
CLASSIC

plain graham crackers
plain marshmallow
Hershey's chocolate

ELVIS

chocolate graham crackers

Flexbox version



NAME YOUR S'MORES:

NEED SOME INSPIRATION?

CLASSIC

plain graham crackers
plain marshmallow
Hershey's chocolate

ELVIS

chocolate graham crackers
plain marshmallow
Hershey's chocolate
peanut butter

Add Modernizr as needed

- Flexbox and fallback styles can often co-exist, but sometimes need to isolate them
- Modernizr can add `flexbox`, `no-flexbox`, and `flexbox-legacy` classes to do this
- Example: add margin between label and input only if flexbox is on:

```
.flexbox .action label {
    margin-right: 10px;
}
```

Full-width nav bar

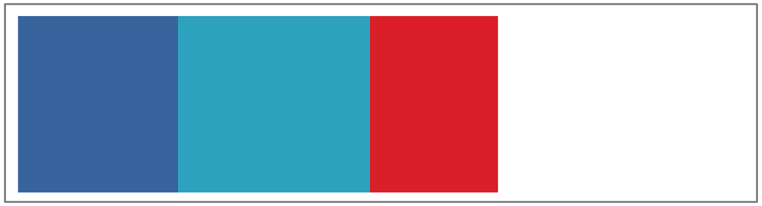
- Requirements:
  - All links on same line
  - First link flush left, last link flush right
  - Equal spaces between all links
- Using `display:table-cell` can do full-width but not equal spaces

Nav with flexbox

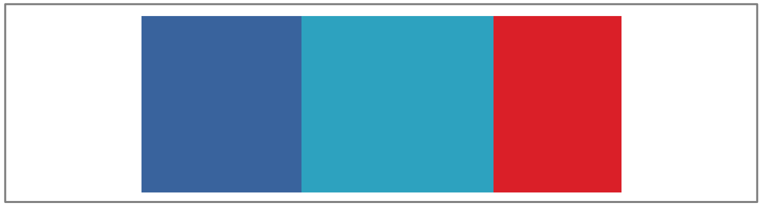
```
.list-nav {
  display: flex;
  justify-content: space-between;
  margin: 0;
  padding: 0;
  list-style: none;
}
.list-nav li {
  /* no flex & no width = shrinkwrap */
  text-align: center;
}
```

justify-content

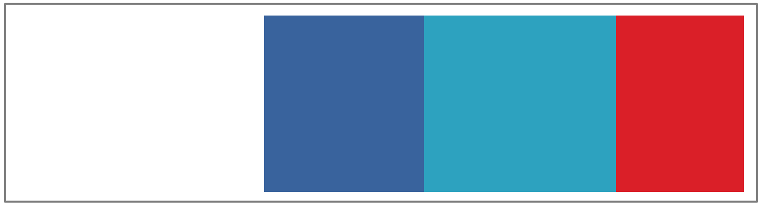
aligns flex items along main axis



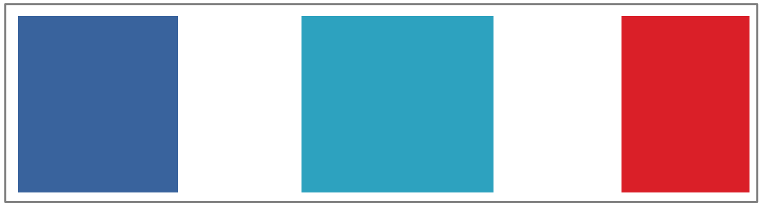
`flex-start`
(default)



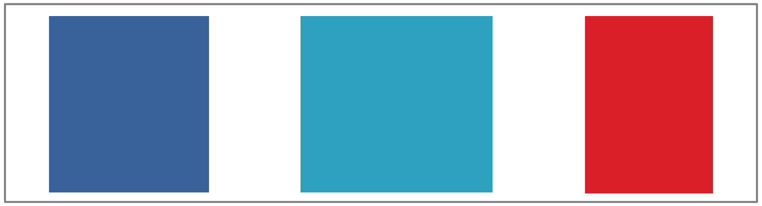
`center`



`flex-end`



`space-between`



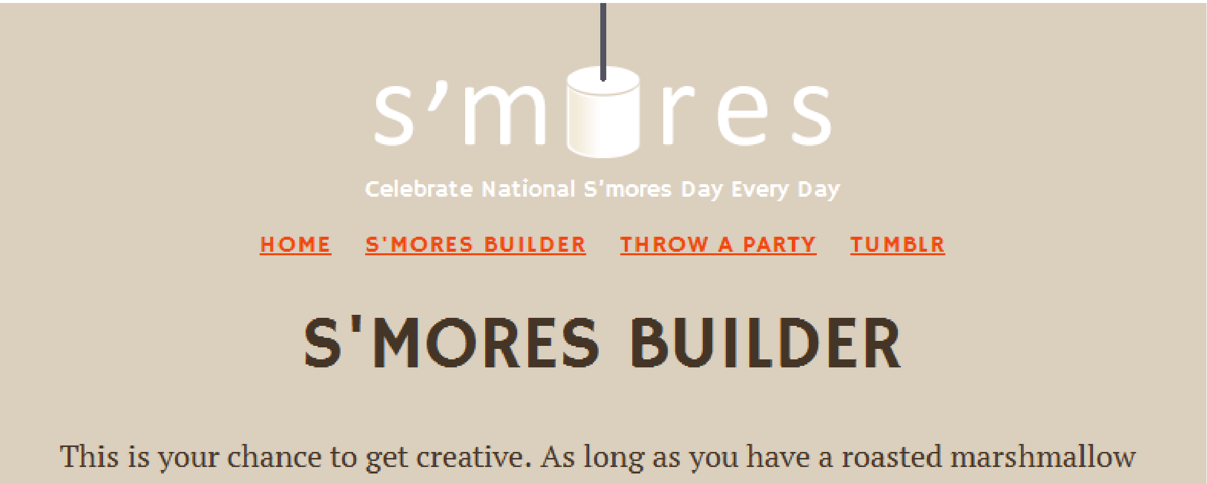
`space-around`

Combine with inline-block

```
.list-nav {
  display: flex;
  justify-content: space-between;
  margin: 0;
  padding: 0;
  list-style: none;
  text-align: center; /* fallback */
}
.list-nav li {
  display: inline-block; /* fallback */
  padding: 0 .5em; /* fallback */
  text-align: center;
}
.list-nav li:first-child { padding-left: 0; }
.list-nav li:last-child { padding-right: 0; }
```

Combine with inline-block

Non-flexbox fallback version



s'mores

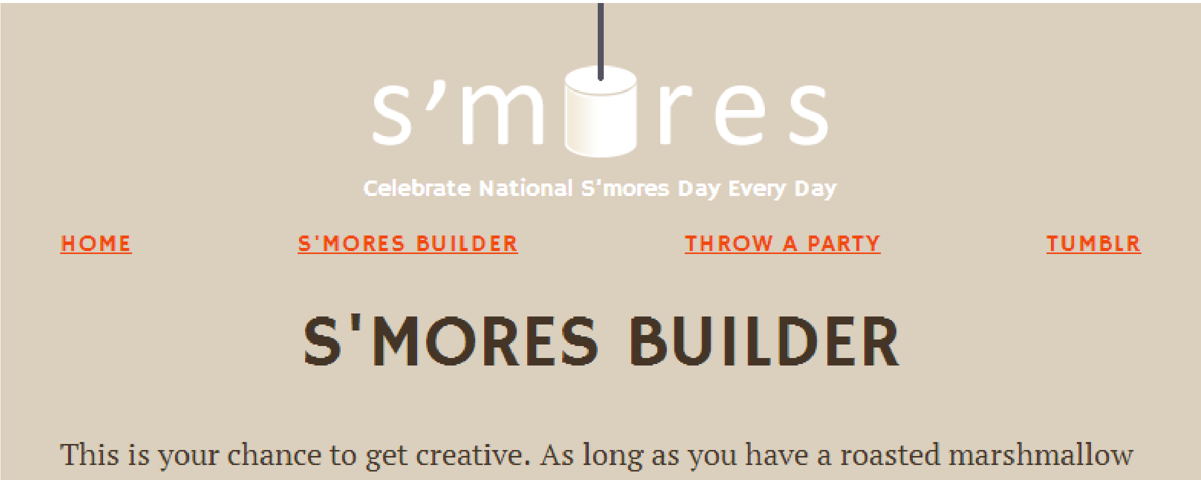
Celebrate National S'mores Day Every Day

HOME S'MORES BUILDER THROW A PARTY TUMBLR

S'MORES BUILDER

This is your chance to get creative. As long as you have a roasted marshmallow

Flexbox version



s'mores

Celebrate National S'mores Day Every Day

HOME S'MORES BUILDER THROW A PARTY TUMBLR

S'MORES BUILDER

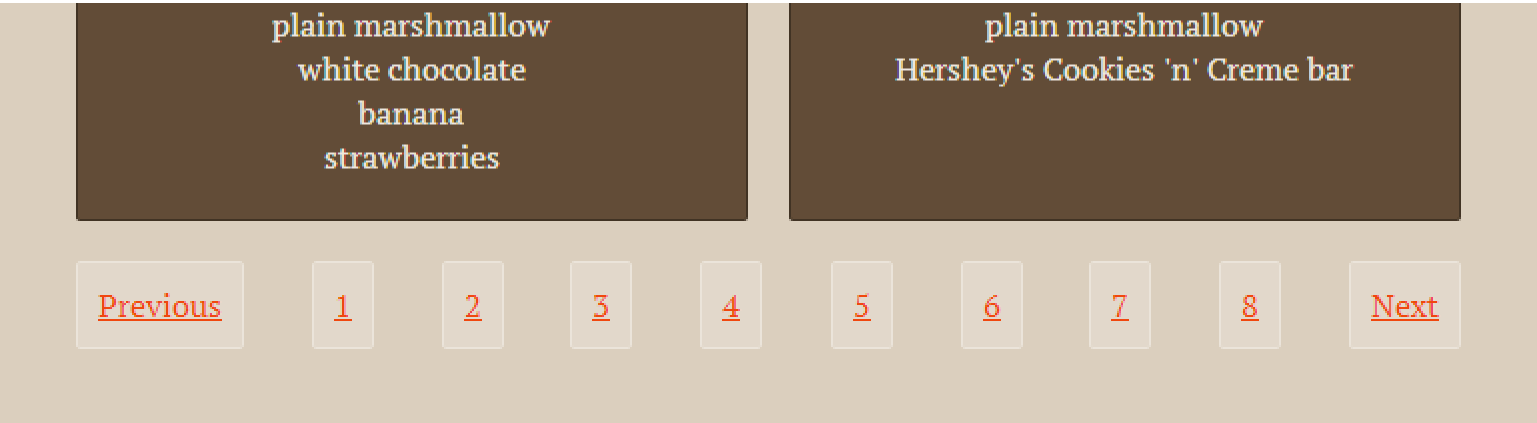
This is your chance to get creative. As long as you have a roasted marshmallow

Combine with table-cell

```css
.list-nav {
  width: 100%; /* fallback */
  display: table; /* fallback */
  display: flex; /* override display:table for flexbox browsers */
  justify-content: space-between;
}
.list-nav li {
  display: table-cell; /* fallback */
  padding: 0 .5em;
  text-align: center;
}
.list-nav li:first-child {
  padding-left: 0;
  text-align: left; /* fallback */
}
.list-nav li:last-child {
  padding-right: 0;
  text-align: right;
}
```

Variation: pagination

- Wide view: all links on same line, centered
  - Set `justify-content:center`
- Medium view: all links on same line, full-width, equal spacing
  - Set `justify-content:space-between`

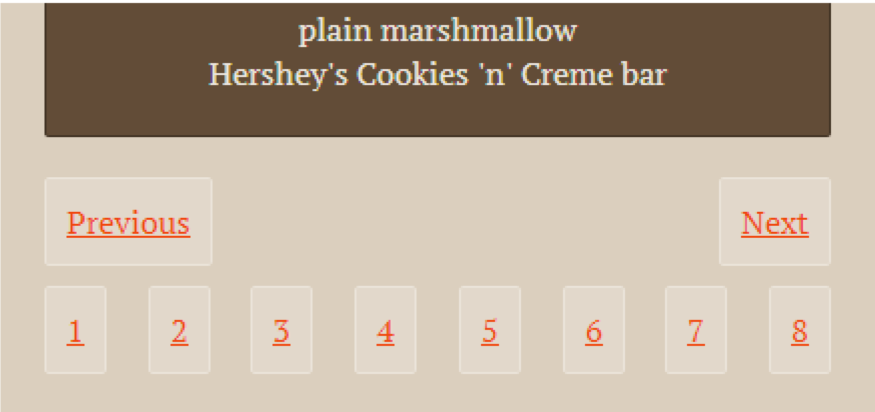


plain marshmallow
white chocolate
banana
strawberries

plain marshmallow
Hershey's Cookies 'n' Creme bar

Variation: pagination

- Narrow view: two lines with “previous” and “next” links on first row, full-width
  - Set `flex-wrap:wrap`
  - Set `justify-content:space-between`
  - Use `order` property to move “next” link up



plain marshmallow
Hershey's Cookies 'n' Creme bar

Visual reordering with flexbox

1. Make “previous” link come first visually, “next” link second, and all the rest third

```
.pagination li {
  order: 2;
  display: inline-block; /* fallback */
}
.pagination li:first-child { /* “Previous” link */
  order: 0;
  text-align: left;
}
.pagination li:last-child { /* “Next” link */
  order: 1;
  text-align: right;
}
```

Visual reordering with flexbox

2. Force links to wrap after “next” link by making it and “previous” link take up 100% of the first line together

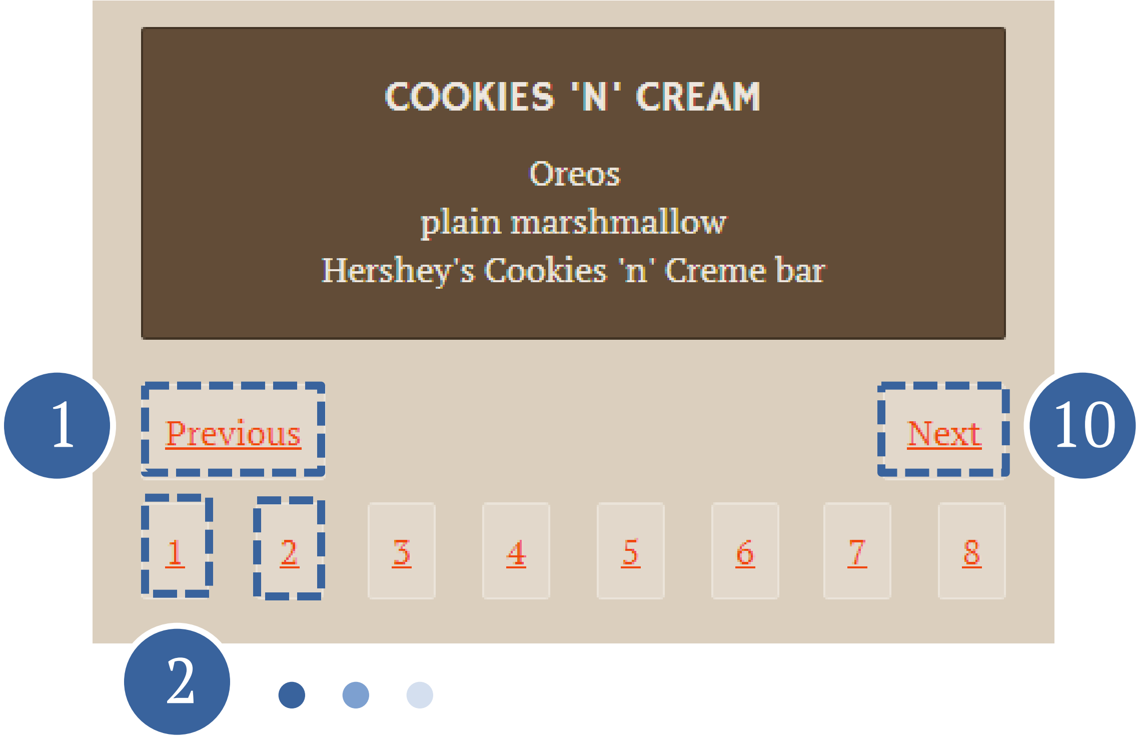
```
.flexbox .pagination li:first-child,
.flexbox .pagination li:last-child {
  width: 50%;
}
.pagination {
  display: flex;
  flex-wrap: wrap;
  justify-content: space-between;
  text-align: center; /* fallback */
}
```

Accessibility implications

Pro	Con
Keep content in logical order in HTML instead of structuring HTML to achieve visual layout	Focus/tab order won’t always match expected order, may jump around seemingly randomly

Tab order = HTML order

“Next” won’t be second link tabbed to after “Previous” since it doesn’t follow it in HTML



COOKIES 'N' CREAM

Oreos
plain marshmallow
Hershey's Cookies 'n' Creme bar

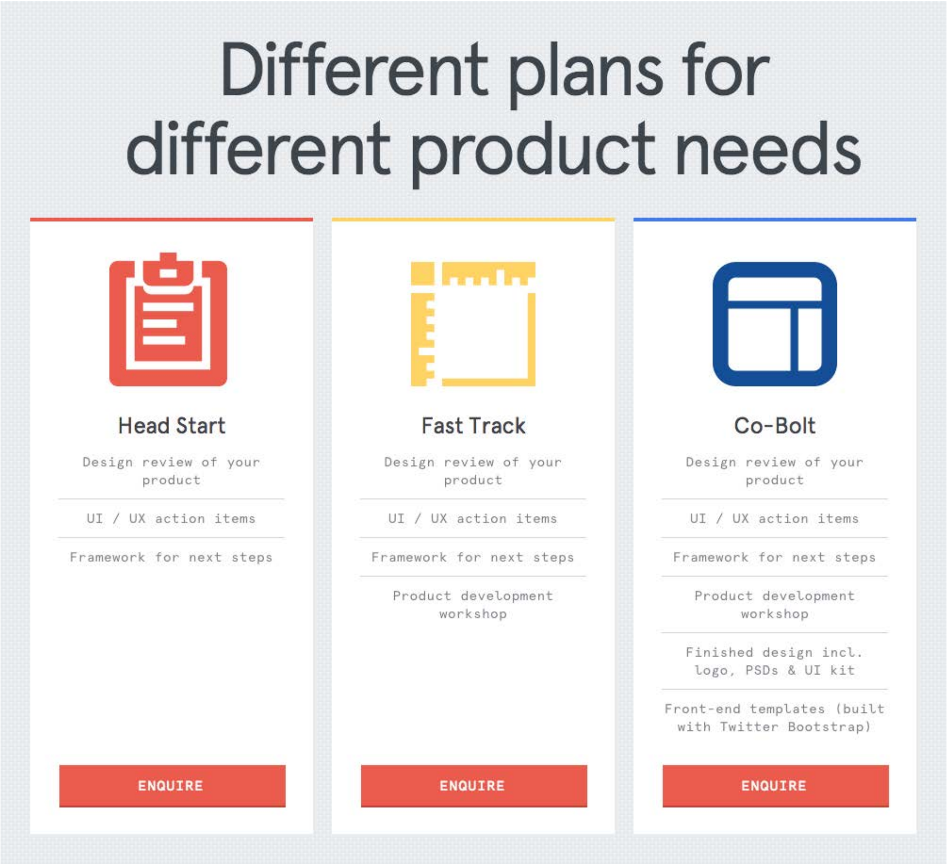
Limitations of order property

- Potential to create confusing tab order
- Can only rearrange sibling elements
- Flexbox rows/cols can't overlap, so content may not always slide into the spot left by the re-ordered content

So: reserve flexbox `order` property for small moves that don't hurt accessibility, and use CSS3 Grid Layout, etc., for bigger re-ordering

Pinned item at bottom

- All boxes equal in height
- Final item in each box pinned to the bottom so that all final items across grid appear to align



Different plans for different product needs

Head Start

Design review of your product

UI / UX action items

Framework for next steps

ENQUIRE

Fast Track

Design review of your product

UI / UX action items

Framework for next steps

Product development workshop

ENQUIRE

Co-Bolt

Design review of your product

UI / UX action items

Framework for next steps

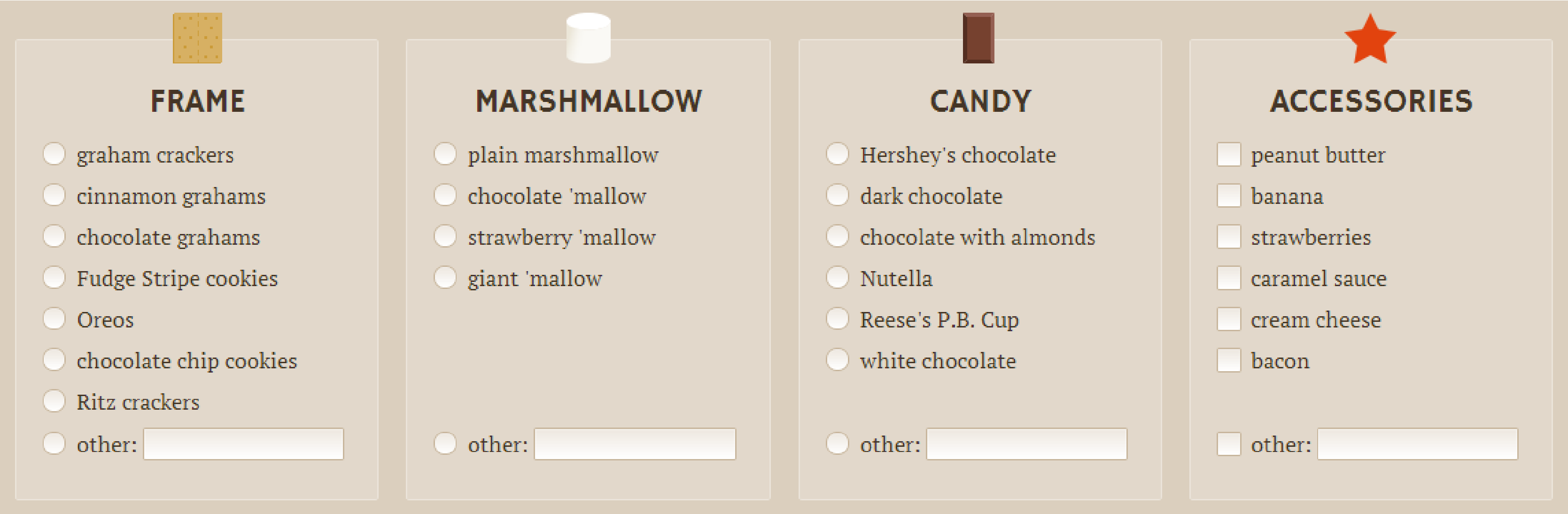
Product development workshop

Finished design incl. logo, PSDs & UI kit

Front-end templates (built with Twitter Bootstrap)

ENQUIRE

Pinned item at bottom



FRAME

○ graham crackers
○ cinnamon grahams
○ chocolate grahams
○ Fudge Stripe cookies
○ Oreos
○ chocolate chip cookies
○ Ritz crackers
○ other:

MARSHMALLOW

○ plain marshmallow
○ chocolate 'mallow
○ strawberry 'mallow
○ giant 'mallow
○ other:

CANDY

○ Hershey's chocolate
○ dark chocolate
○ chocolate with almonds
○ Nutella
○ Reese's P.B. Cup
○ white chocolate
○ other:

ACCESSORIES

□ peanut butter
□ banana
□ strawberries
□ caramel sauce
□ cream cheese
□ bacon
□ other:

- Without flexbox, "other" fields disconnected from each other and thus can't align
- With flexbox, they're still disconnected, but their parents aren't and can be equal height, plus…

New "auto" margin behavior

- Margins set to `auto` get all the free space left
- So, to pin flex item to bottom of its flex container:
  - set `flex-direction:column` on flex container so items can fill its height
  - set `margin-top:auto` on item you want to pin

Pin the “other” fields

1. Make each `.component` match in height by making parent `.builder` a flex container (already done)

```
.builder {
  display: flex;
  align-items: stretch; /* default */
  flex-wrap: wrap;
  justify-content: space-between;
  margin: 0 0 40px -20px;
}
```

Pin the “other” fields

2. Make each `<ul>` a flex item and stretch to full height, then make it a flex container with vertical direction so its `<li>` will stack

```
.component {
  flex: 1 1 200px;
  display: flex;
  flex-direction: column;
}
```

```
.component ul {
  flex: 1;
  display: flex;
  flex-direction: column;
  margin: 0;
  padding: 0;
  list-style: none;
}
```

Pin the “other” fields

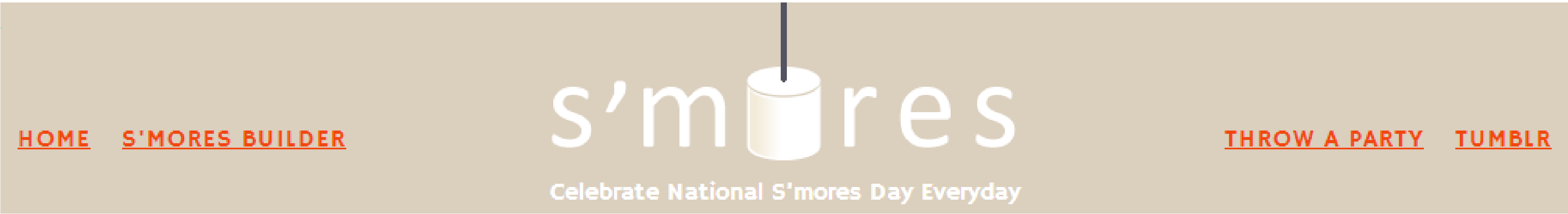
3. Give “other” `<li>` an `auto` top margin so all free space left in `<ul>` is put above that `<li>`, pushing it to bottom of `<ul>`

```
.component li:last-child {
  margin-top: auto;
}
```

Pinning without flexbox

- Use `display:table-cell` for equal height boxes
- Add bottom padding in ems to each box
- Use absolute positioning to pin “other” row in space left by padding

Variation: two-piece main nav



```
.flexbox .list-nav {
  justify-content: flex-start;
  position: relative;
  top: -70px;
}
.flexbox #link-home { margin-right:20px; }
.flexbox #link-tumblr { margin-left:20px; }
.flexbox #link-party {
  margin-left: auto;
}
```

“I *can* use it, but *why* should I?

Why go to the trouble to use flexbox as progressive enhancement now?”

Develop it as a career skill

- Essential layout tool in the future, especially with responsive web design
- Syntax is not going to change much, so what you learn now will still work later
- Better to learn something before it’s needed in a project rather than during

“ Why should I do it with CSS

when I can do the same thing with <font> tags?”

–Zoe, circa 2002

“Why should I do it with flexbox

when I can do the same thing with floats?”

We all learn best by doing

- I learned a lot more about flexbox by building demo site for this presentation—a lot
- Have to try it to learn it
- Using it for small cosmetic enhancements is low-risk way to try it

It’s fun

- Great user experience is important, but great developer experience is worthwhile too
- Enjoy your job to get better at your job
- Sometimes the little extra time is worth the fun challenge and reward at the end

Learn more

Download slides and get links at www.zomigi.com/blog/flexbox-presentation

Thanks!

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@zomigi

design@zomigi.com

zomigi.com | stunningcss3.com | flexiblewebbook.com