

# Now and Next in Responsive Design

RACHEL ANDREW AT WEB UNLEASHED, OCTOBER 2022

How do we support all these  
different screen sizes?



Issue №  
**306**

## Responsive Web Design

by [Ethan Marcotte](#) · May 25, 2010

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“

**The control which designers know in the print medium, and often desire in the web medium, is simply a function of the limitation of the printed page. We should embrace the fact that the web doesn't have the same constraints, and design for this flexibility. But first, we must 'accept the ebb and flow of things.'**

“

# Responsive Web Design

- Calculating percentages for floated layouts
- Squishing images
- Leaning on Media Queries

# column-count: 3

Turnip greens yarrow ricebean  
rutabaga endive cauliflower sea  
lettuce kohlrabi amaranth water  
spinach avocado daikon napa  
cabbage asparagus winter  
purslane kale. Celery potato  
scallion desert raisin horseradish  
spinach carrot soko. Lotus root  
water spinach fennel kombu  
maize bamboo shoot green bean  
swiss chard seakale pumpkin  
onion chickpea gram corn pea.  
Brussels sprout coriander water

chestnut gourd swiss chard  
wakame kohlrabi beetroot carrot  
watercress. Corn amaranth salsify  
bunya nuts nori azuki bean  
chickweed potato bell pepper  
artichoke.

Nori grape silver beet broccoli  
kombu beet greens fava bean  
potato quandong celery. Bunya  
nuts black-eyed pea prairie turnip  
leek lentil turnip greens parsnip.  
Sea lettuce lettuce water chestnut  
eggplant winter purslane fennel

azuki bean earthnut pea sierra  
leone bologi leek soko chicory  
celtuce parsley jícama salsify.

Celery quandong swiss chard  
chicory earthnut pea potato.  
Salsify taro catsear garlic gram  
celery bitterleaf wattle seed  
collard greens nori. Grape wattle  
seed kombu beetroot horseradish  
carrot squash brussels sprout  
chard.

Flexbox responds to  
the content

```
display: flex
```

I am item one

I am item two

I am item three

`display: flex`

I am item  
one

I am item  
two

I am item three and I have a lot more content than the other two  
items.



What does it mean to respond  
to content?

`flex-basis: auto`

I am item one

I am item two

I am item three

`max-content`

`flex-basis: auto`

I am item  
one

I am item  
two

I am item three and I have a lot more content than the other two  
items.

Space reduced from max-content until all boxes fit

We don't have to line  
everything up.

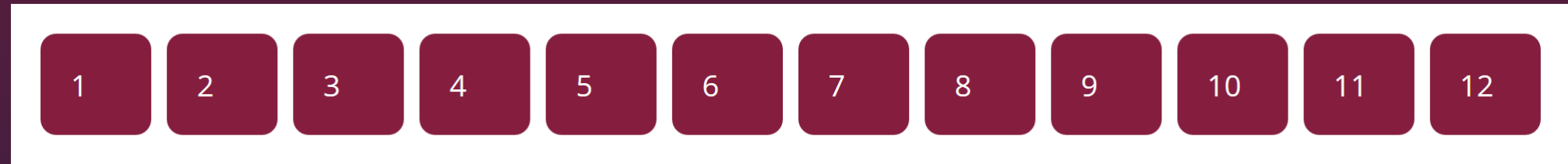
Sometimes what we need is just to make things fit nicely.

# CSS Grid

For when you do want to line everything up.

```
.grid {  
  display: grid;  
  grid-template-columns: repeat(12, 1fr);  
}
```

```
repeat(12, 1fr)
```



```
.grid {  
  display: grid;  
  grid-template-columns:  
    repeat(12, minmax(auto, 1fr));  
}
```



```
repeat(12, 1fr)
```

1

2

3

4

5

6

7

8

9

10

ElevenIsLonger

12

```
.grid {  
  display: grid;  
  grid-template-columns:  
    repeat(12, minmax(0, 1fr));  
}
```

```
repeat(12, minmax(0, 1fr))
```

1

2

3

4

5

6

7

8

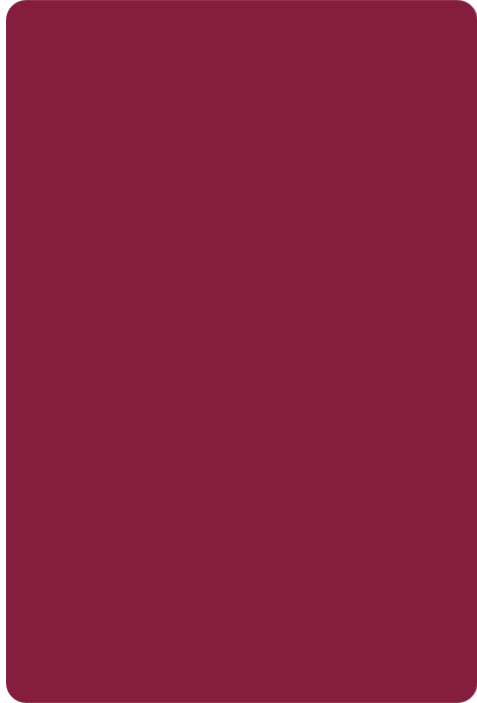
9

10

Eleven

12

Responding to content in a grid  
layout world



Turnip greens yarrow ricebean rutabaga endive cauliflower sea lettuce  
kohlrabi amaranth water spinach avocado daikon napa cabbage asparagus  
winter purslane kale. Celery potato scallion desert raisin horseradish spinach  
carrot soko. Lotus root water spinach fennel kombu maize bamboo shoot  
green bean swiss chard seakale pumpkin onion chickpea gram corn pea.  
Brussels sprout coriander water chestnut gourd swiss chard wakame kohlrabi  
beetroot carrot watercress. Corn amaranth salsify bunya nuts nori azuki bean  
chickweed potato bell pepper artichoke. Nori grape silver beet broccoli kombu  
beet greens fava bean potato quandong celery. Bunya nuts black-eyed pea  
prairie turnip leek lentil turnip greens parsnip. Sea lettuce lettuce water  
chestnut eggplant winter purslane fennel azuki bean earthnut pea sierra leone  
bologi leek soko chicory celtuce parsley jícama salsify.



```
grid-template-columns: repeat(3, auto)
```

Item One

Item Two

Item Three

Item Four

Item Five

justify-content: start

Item One

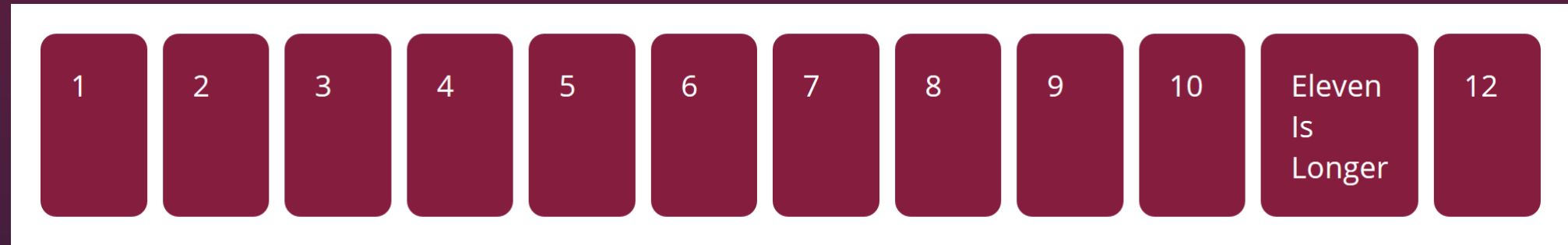
Item Two

Item Three

Item Four

Item Five

```
repeat(12, 1fr)
```





`flex-basis: auto`

I am item  
one

I am item  
two

I am item three and I have a lot more content than the other two  
items.

`repeat(3, 1fr)`

I am item one

I am item two

I am item three and I have a lot more content than the other two  
items.

# min-content, max-content, fit-content

Directing content-based sizing

```
repeat(3, min-content)
```

I am  
item  
one

I am  
item  
two

I am  
item  
three  
and I  
have a  
lot  
more  
content  
than  
the  
other  
two  
items.

```
repeat(3, max-content)
```

I am item one

I am item two

I am item three and I have a lot more content than the other two items.

```
repeat(3, fit-content(400px))
```

I am item one

I am item two

I am item three and I have a lot more  
content than the other two items.

max-content

400px

```
.media {  
  display: grid;  
  grid-template-columns: fit-content(300px) 1fr;  
  gap: 20px;  
}
```



Turnip greens yarrow ricebean rutabaga endive cauliflower sea lettuce kohlrabi amaranth water spinach avocado daikon napa cabbage asparagus winter purslane kale. Celery potato scallion desert raisin horseradish spinach carrot soko. Lotus root water spinach fennel kombu maize bamboo shoot green bean swiss chard seakale pumpkin onion chickpea gram corn pea.



Turnip greens yarrow ricebean rutabaga endive cauliflower sea lettuce kohlrabi amaranth water spinach avocado daikon napa cabbage asparagus winter purslane kale. Celery potato scallion desert raisin horseradish spinach carrot soko. Lotus root water spinach fennel kombu maize bamboo shoot green bean swiss chard seakale pumpkin onion chickpea gram corn pea.

# Media Queries



# column-width: 200px

Turnip greens yarrow  
ricebean rutabaga  
endive cauliflower sea  
lettuce kohlrabi  
amaranth water spinach  
avocado daikon napa  
cabbage asparagus  
winter purslane kale.  
Celery potato scallion  
desert raisin horseradish  
spinach carrot soko.  
Lotus root water spinach  
fennel kombu maize

bamboo shoot green  
bean swiss chard seakale  
pumpkin onion chickpea  
gram corn pea. Brussels  
sprout coriander water  
chestnut gourd swiss  
chard wakame kohlrabi  
beetroot carrot  
watercress. Corn  
amaranth salsify bunya  
nuts nori azuki bean  
chickweed potato bell  
pepper artichoke.

Nori grape silver beet  
broccoli kombu beet  
greens fava bean potato  
quandong celery. Bunya  
nuts black-eyed pea  
prairie turnip leek lentil  
turnip greens parsnip.  
Sea lettuce lettuce water  
chestnut eggplant winter  
purslane fennel azuki  
bean earthnut pea sierra  
leone bologi leek soko  
chicory celtuce parsley

jícama salsify.  
Celery quandong swiss  
chard chicory earthnut  
pea potato. Salsify taro  
catsear garlic gram  
celery bitterleaf wattle  
seed collard greens nori.  
Grape wattle seed  
kombu beetroot  
horseradish carrot  
squash brussels sprout  
chard.

# flex-wrap: wrap

I am item one

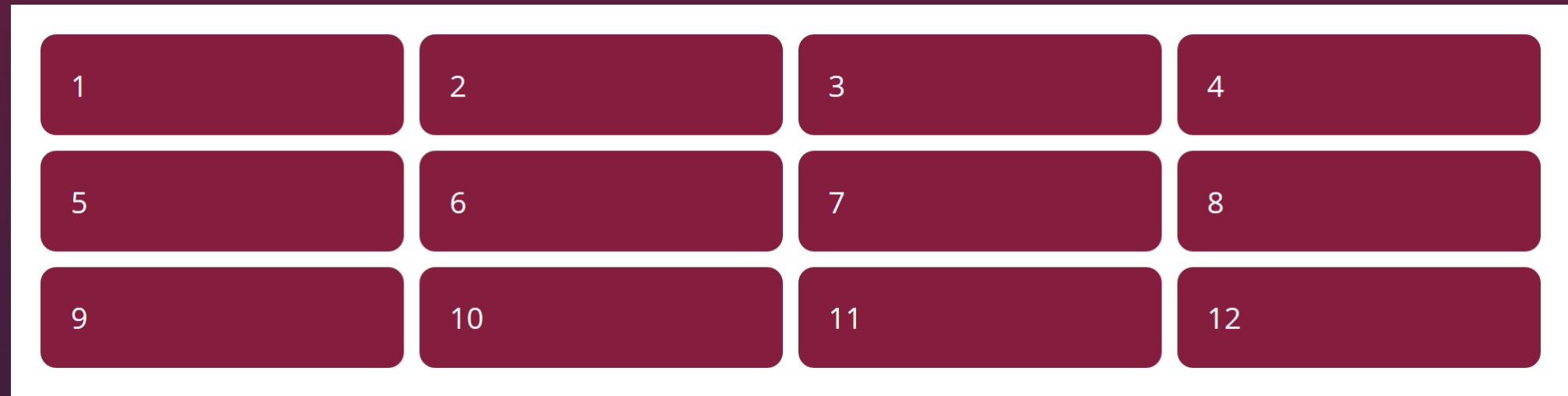
I am item two

I am item three and I have a lot more content than the other four items.

I am item four

I am item five

```
repeat(auto-fill, minmax(200px, 1fr))
```



# The first rule of Media Queries is ...

Do I need a media query?

```
.wrapper {  
  display: grid;  
  grid-template-areas:  
    "hd"  
    "bd"  
    "sd"  
    "ft";  
}
```

The header.

Turnip greens yarrow ricebean rutabaga  
endive cauliflower sea lettuce kohlrabi  
amaranth water spinach avocado daikon napa  
cabbage asparagus winter purslane kale.  
Celery potato scallion desert raisin horseradish  
spinach carrot soko.

The sidebar

The footer.

```
@media (min-width: 600px) {  
  .wrapper {  
    grid-template-columns: 3fr 1fr;  
    grid-template-areas:  
      "hd hd"  
      "bd sd"  
      "ft ft";  
  }  
}
```

The header.

Turnip greens yarrow ricebean rutabaga endive cauliflower sea lettuce  
kohlrabi amaranth water spinach avocado daikon napa cabbage  
asparagus winter purslane kale. Celery potato scallion desert raisin  
horseradish spinach carrot soko.

The sidebar

The footer.



# More than just screen size

What else could we respond to?

What type of pointer do I have?

```
@media (pointer:coarse) {  
  .pointer::before {  
    content: "You have a coarse pointer";  
  }  
}  
  
@media (pointer:fine) {  
  .pointer::before {  
    content: "You have a fine pointer";  
  }  
}
```

Can I hover?

```
@media (hover) {  
  .can-i-hover::after {  
    content: "You look like you can hover.";  
  }  
}
```

```
@media (hover:none) {  
  .can-i-hover::after {  
    content: "I don't think you can hover.";  
  }  
}
```

# Testing capabilities

Check for screen size, but also pointer type and hover ability to understand the environment your site is being used in.

# Responding to the wishes of the visitor

Media Queries Level 5 and User Preference Media Features

prefers-reduced-motion



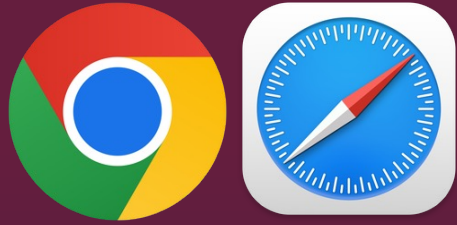
```
@media (prefers-reduced-motion: reduce) {  
  .animation {  
    animation: none;  
  }  
}
```



# New syntax for range media queries

```
@media (min-width: 600px) {  
  .wrapper {  
    grid-template-columns: 3fr 1fr;  
    grid-template-areas:  
      "hd hd"  
      "bd sd"  
      "ft ft";  
  }  
}
```

```
@media (width > 600px) {  
  .wrapper {  
    grid-template-columns: 3fr 1fr;  
    grid-template-areas:  
      "hd hd"  
      "bd sd"  
      "ft ft";  
  }  
}
```



# Container queries

```
.element {  
  container-type: inline-size;  
}
```

```
.element {  
  container-type: inline-size;  
  container-name: sidebar;  
}
```

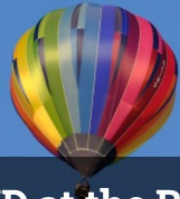
```
@container (min-width: 500px) {
```

```
}
```



```
@container sidebar (min-width: 500px) {
```

```
}
```



**G-CIND at the Bristol Balloon Fiesta 2022**

**After two years the Bristol Balloon Fiesta was back. Most of Bristol could be found trekking up the hill at 5.30am to worship their strange hot-air demanding gods.**



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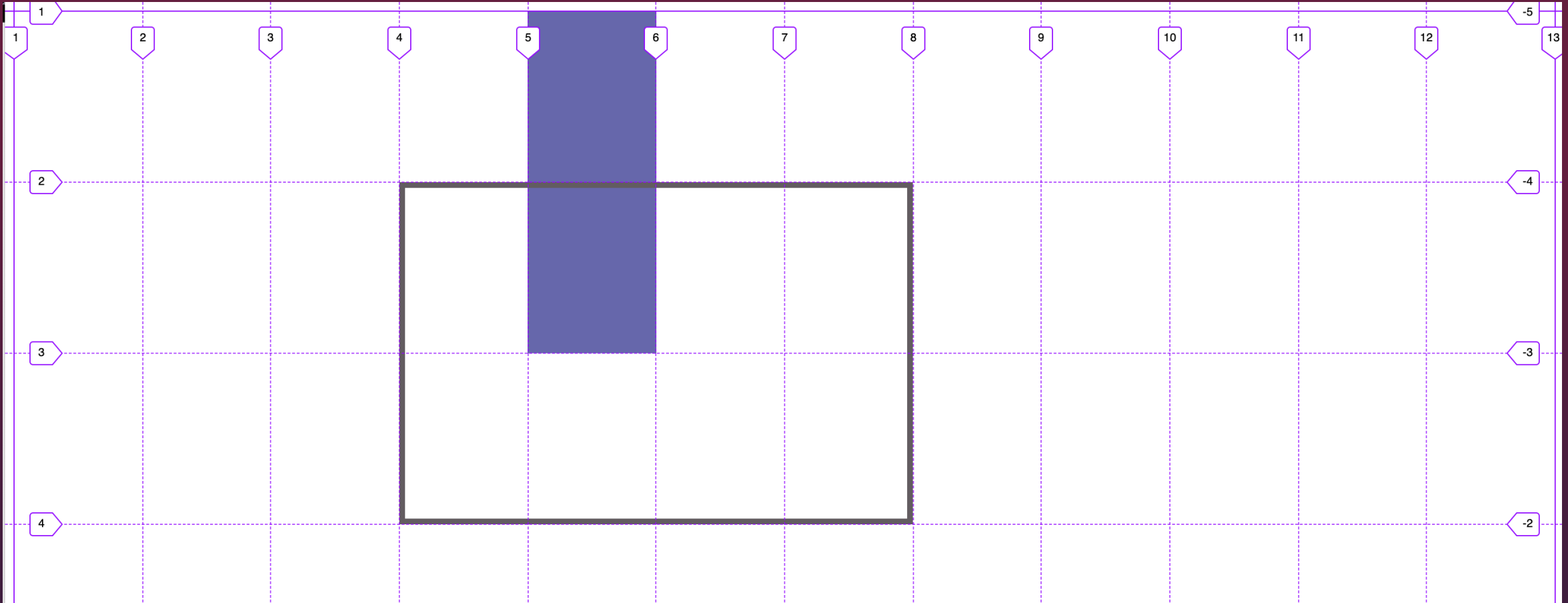


Subgrid

```
.child-grid {  
  display: grid;  
  grid-template-columns: subgrid;  
  grid-template-rows: subgrid;  
}
```

```
.main-grid {  
  display: grid;  
  grid-template-columns: repeat(12,1fr);  
  grid-template-rows: repeat(4, minmax(150px, auto));  
}
```

```
.child-grid {  
  grid-column: 4 / 8;  
  grid-row: 2 / 4;  
  display: grid;  
  grid-template-columns: subgrid;  
  grid-template-rows: subgrid;  
}
```



Inspector Console Debugger Network Style Editor Performance Memory Storage Accessibility Application

Search HTML + Filter Styles :hov .cls + [Icons]

```
<body translate="no">
  <div class="main-grid"> grid overflow
    <div class="item grid-item"></div>
    <div class="child-grid"> subgrid
      <div class="item child-grid-item"></div>
    </div>
</body>
</html>
```

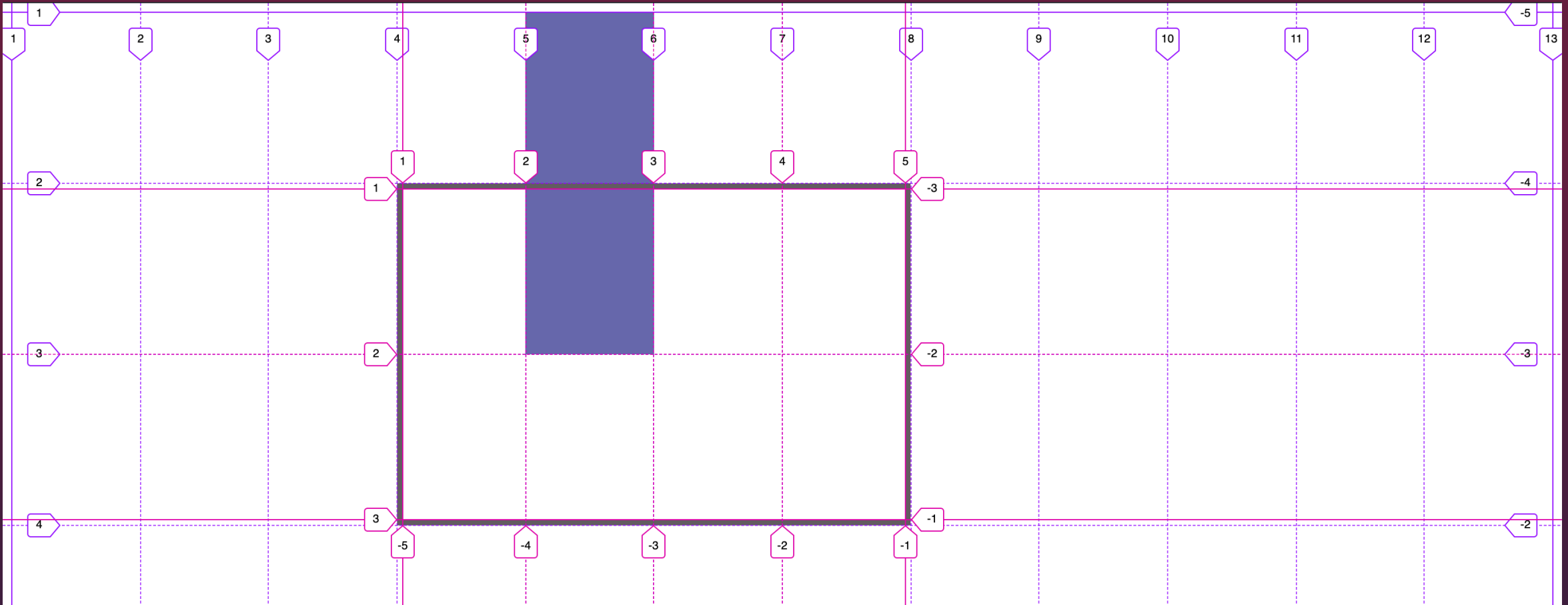
element { inline  
}

```
.child-grid { inline:8  
border: 5px solid #625c60;  
grid-column: 4 / 8;  
grid-row: 2 / 4;  
display: grid;  
grid-template-columns: subgrid;  
grid-template-rows: subgrid;
```

Layout Computed Changes Compatibility

- Flexbox
  - Select a Flex container or item to continue.
- Grid
  - Overlay Grid
    - div.main-grid
    - div.child-grid

rame-wrap > iframe#result.result-iframe > html > body > div.main-grid > div.child-grid > div.item.child-grid-item > }



Inspector Console Debugger Network Style Editor Performance Memory Storage Accessibility Application

Search HTML

```
<body translate="no">  
  <div class="main-grid" style="border: 1px dashed purple; display: grid; grid-template-columns: repeat(12, 1fr); grid-template-rows: repeat(4, 1fr);">  
    <div class="item grid-item" style="width: 100%; height: 100%; background-color: #f0f0f0; border: 1px dashed purple;">  
      <div class="child-grid" style="border: 2px solid purple; display: grid; grid-template-columns: repeat(4, 1fr); grid-template-rows: repeat(3, 1fr);">  
        <div class="item child-grid-item" style="width: 100%; height: 100%; background-color: #f0f0f0; border: 1px dashed purple;">  
        </div>  
      </div>  
    </div>  
</body>  
</html>
```

Filter Styles

```
element {  
  inline  
}  
.child-grid {  
  inline: 8  
  border: 2px solid #625c60;  
  grid-column: 4 / 8;  
  grid-row: 2 / 4;  
  display: grid;  
  grid-template-columns: subgrid;  
  grid-template-rows: subgrid;  
}
```

Layout Computed Changes Compatibility

- Flexbox
  - Select a Flex container or item to continue.
- Grid
  - Overlay Grid
    - div.main-grid
    - div.child-grid

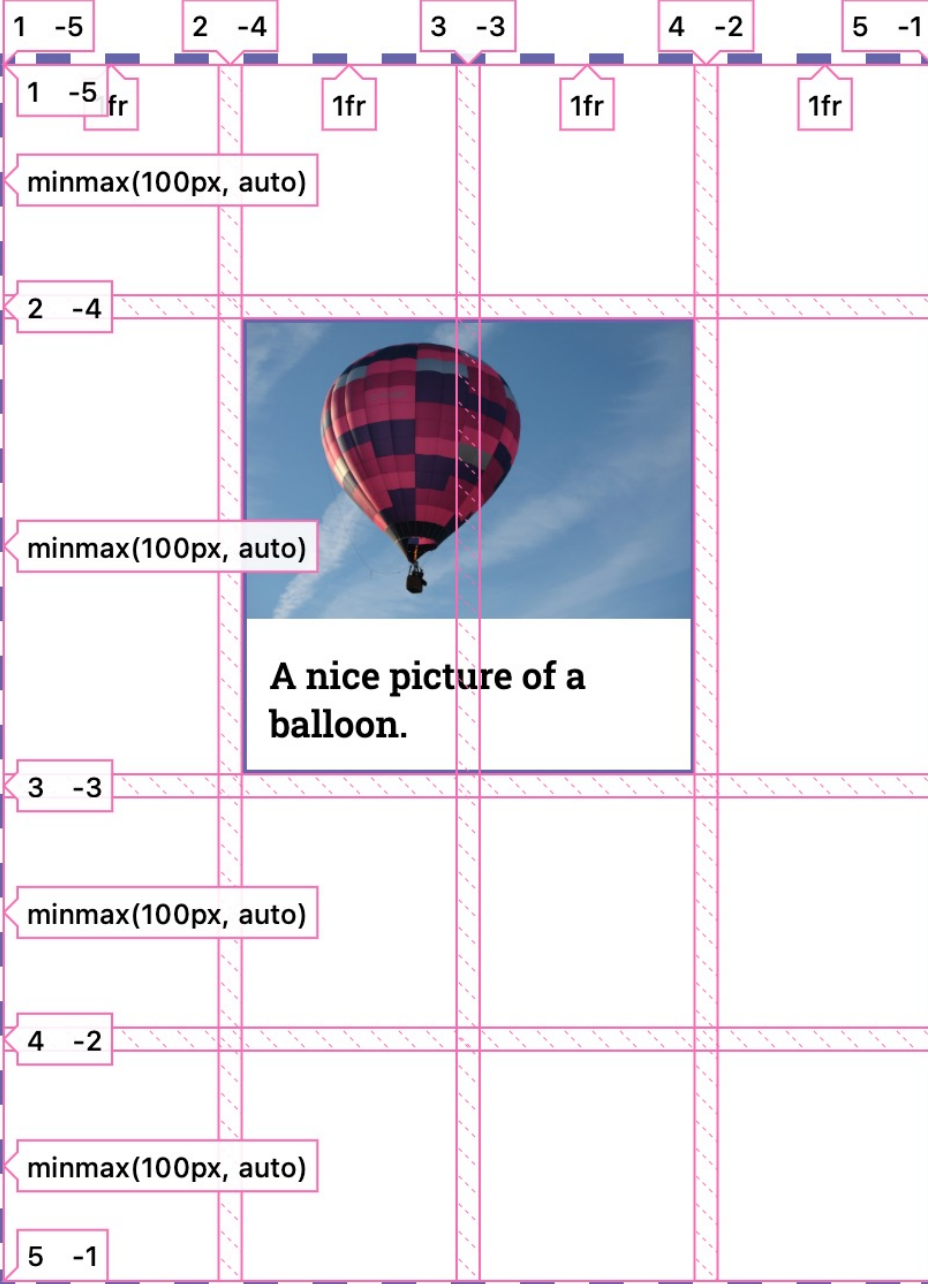
rame-wrap > iframe#result.result-iframe > html > body > div.main-grid > div.child-grid > div.item.child-grid-item >

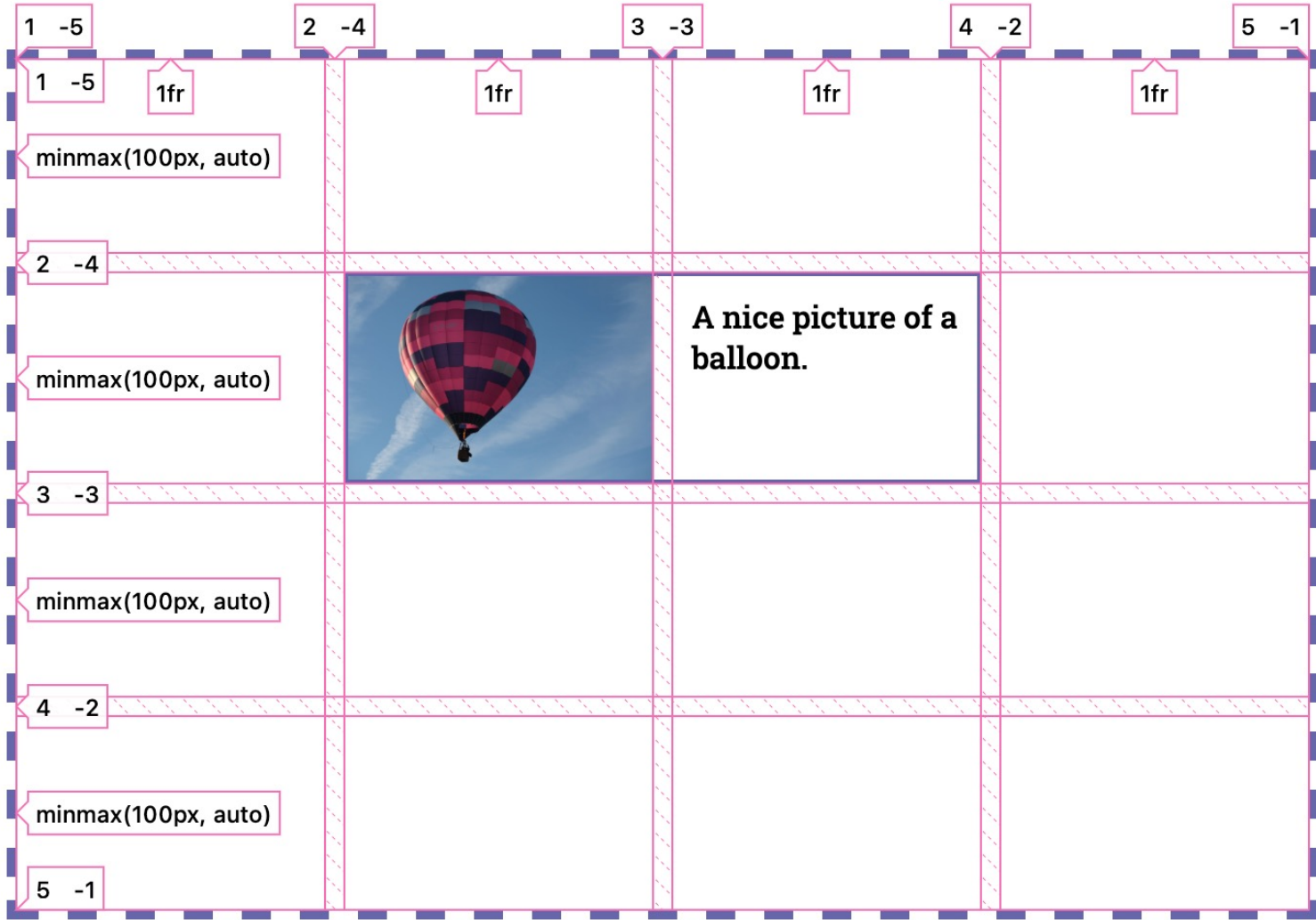


# Subgrid + container queries



```
@container my-grid (min-width: 600px) {  
  .item {  
    display: grid;  
    grid-template-columns: subgrid;  
  }  
}
```







:has()



```
@container (min-width: 500px) {  
  .card:has(figure+.content) {  
    display: grid;  
    grid-template-columns: .8fr 1fr;  
    gap: 10px;  
  }  
}
```



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Fiesta 2022**

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What does it mean to do  
responsive design today?



Respond to content

Use new layout and image  
features

Use media features and  
container queries to enhance  
your layout.

It's not just about screen, or  
even component, size

Responding to needs and  
environment

Don't expect people to fix something to use your website. Respond to meet them where they are.

Thank you!

<https://noti.st/rachelandrew>