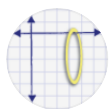


perpendicular angel design

organizing and simplifying, one illumination at a time

AN EVENT APART OT 2021: HOW TO UNDERSTAND CSS BY RACHEL ANDREW

Next up: Rachel Andrew explains How to Understand CSS. Because this year I used Twitter's threading / topics feature, it's giving me 2 tweets in each embed I do here. I'm embedding every other tweet for readability. There's a PDF at the bottom of the page in case this all collapses.

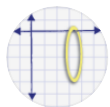


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Next up: Rachel Andrew explains how to understand CSS. She's stepping in to fill in for another speaker who had to back out at the last minute. (Thank you Rachel!) [#aeaot](#)



Anne Gibson
@perpendicularme

Learning CSS means learning how and why CSS works, rather than showing you some copy and paste code. Revisit the things you already know. Things that made sense in 2005 may not make sense anymore. [#aeaot](#)

1:33 PM · Oct 11, 2021

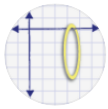


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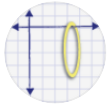


Replying to @perpendicularme

The netscape resize fix from 2005 was to fix a bug for how fixed positioned stuff. Do we check to see if these are real issues anymore?

CSS has evolved. Things have been clarified. The basics have shifted.

[#aeaot](#)



Anne Gibson

@perpendicularme

Some CSS has weird names, weird casing, and odd rules. We can't break the web — we can't always fix the things we consider weird. The CSS Working Group (WG) has a list. [#aeaot](#)

1:34 PM · Oct 11, 2021

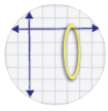


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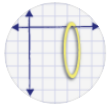


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Naming things is hard. International naming things is even harder. Sometimes you have to learn what things are called. #aeaot



Anne Gibson

@perpendicularme

Writing modes: flex box and grid introduced a writing mode agnostic way to do layout. No top, right, bottom, and left. Instead start and end, line number, etc. Block dimension is displayed in the direction we read blocks. (Up down in English.) #aeaot

1:36 PM · Oct 11, 2021

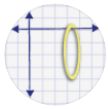


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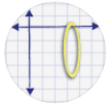


Replying to @perpendicularme

Inline is the layout in the line we read. In English that's left right.
In other languages it might be right left, or top bottom.

Block start is the first paragraph. Inline start is the first sentence's first character.

Everything else is tied to the screen layout#aeaot



Anne Gibson

@perpendicularme

writing mode vertical r-l get wonky when the direction is changed - the width and height aren't related to the flow of content. #aeaot

1:38 PM · Oct 11, 2021

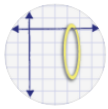


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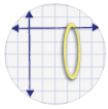
Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Logical properties and values flow relative to follow the text direction. Inline-size (size in the inline direction) and block-size (size in the block direction). We have these mappings for everything. Padding-block-start, padding-inline-end, etc.

[#aeaot](#)



Anne Gibson

@perpendicularme

Flow-relative dimensions will eventually become our defaults.

Margin is currently clock-face today. Grid-area uses starts and ends. But margin is old and we can't break it, we have to figure out what to do with it. [#aeaot](#)

1:40 PM · Oct 11, 2021

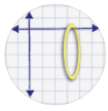


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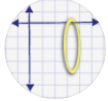


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Initial values: every css property has one, and it's what you have if you don't set it. Most layout initial values impact how we layout. As soon as you say "display: flex" the children go into their flex defaults [#aeaot](#)



Anne Gibson

@perpendicularme

Layout: items participate in block formatting by default. (not grid or flex box, etc.) Normal flow is a layout method. We don't need to define how every single element looks.

We don't need reset stylesheets anymore, work with the browser default styles to create. [#aeaot](#)

1:43 PM · Oct 11, 2021

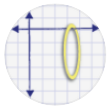


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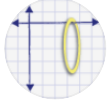


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

If we change the value of display we're changing the formatting context. Only direct children switch to grid or flex - the grandchildren of the flexbox goes back to block formatting
[#aeaot](#)



Anne Gibson

@perpendicularme

You can use anything you like, block, grid, and flexbox are all just display values. [#aeaot](#)

1:46 PM · Oct 11, 2021

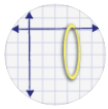


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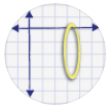


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Generated content (::before and ::after) are problematic due too history. They're pseudo-elements. A long time ago they were :before and :after. Browsers maintain that syntax. They add before and after the *children* of the box. First and last child.
[#aeaot](#)



Anne Gibson
@perpendicularme

you can use this to do things like lines either side of a heading in a grid. [The example is awesome. i can't tell you how many complex layouts I've seen to put little touches like lines around a header on a page.] [#aeaot](#)

1:49 PM · Oct 11, 2021

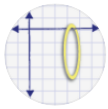


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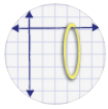
Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Absolute positioning yanks something out of the flow. You're responsible for managing overlaps.

Floats also yank things out of the flow, just without the overlaps. Backgrounds, etc. (clearfix hack) were necessary. [#aeaot](#)



Anne Gibson

@perpendicularme

display: flow-root creates a new block formatting context. things can't poke out of the initial page. everything stays inside that particular block. [OMG!]

"Start over, don't let anything out of this box."

[OMG OMG!]

[#aeaot](#)

1:51 PM · Oct 11, 2021

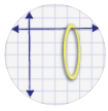


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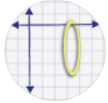


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Margin collapsing is still something that confuses people. It was defined in CSS 1 and makes perfect sense for laying out paragraphs. You don't want huge gaps between paragraphs. That's what it was designed to do. [#aeaot](#)



Anne Gibson

@perpendicularme

Maybe it should be called "margin combining" - one margin ends up inside the other.

Only collapses in the block dimension.

Only collapses for block formatted items.

Margin-bottom of paragraph 1 combines with the margin top of paragraph 2, so the larger margin wins [#aeaot](#)

1:53 PM · Oct 11, 2021

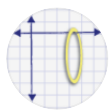


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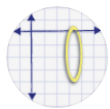


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Completely empty boxes have top and bottom margins that combine. [Well damn that explains a lot...] [#aeaot](#)



Anne Gibson

@perpendicularme

Margin collapse can be really handy when your CMS is adding empty paragraphs. [#aeaot](#)

1:54 PM · Oct 11, 2021

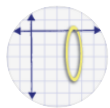


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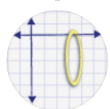


Replying to @perpendicularme

When a parent and child are shown together, the child margin can end up outside the box. If you add a border to the box, it will stop the collapsing.

Dev tools are the best way to see what's actually going on.

[#aeaot](#)



Anne Gibson

@perpendicularme

Box alignment. This is alignment and space distribution. Alignment is why we talk about writing modes. Alignment is very much specified by the writing mode of the document. [#aeaot](#)

1:56 PM · Oct 11, 2021

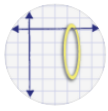


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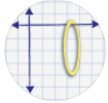
Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Alignment is aligning in the block and the inline dimensions. We have to talk about distribution of space. If the tracks don't add up with extra space. Or grid items moving around an area.

[#aeaot](#)



Anne Gibson

@perpendicularme

Align-start for block and inline will put things in the top left corner and go from there.

Justify-content will space things out in the inline dimension.

In the block space, we use align-content. [#aeaot](#)

1:58 PM · Oct 11, 2021

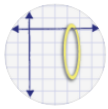


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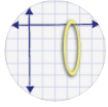


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

In flex box we can change the text direction, so block and inline can be more confusing. Main axis for justify and align on the cross axis [#aeaot](#)



Anne Gibson

@perpendicularme

if you switch into flexbox you don't have justify-self, items act as a group. [#aeaot](#)

2:02 PM · Oct 11, 2021

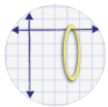


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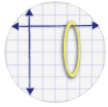


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

We can use align-self on flexbox. [#aeaot](#)



Anne Gibson

@perpendicularme

if the properties end with -content they're dealing with space distribution. If they end in -items or -self they align within the grid area [#aeaot](#)

2:04 PM · Oct 11, 2021



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zeldman 
@zeldman



Rachel Andrew lays out the core concepts needed to fully understand the new CSS as the [#CSS](#) Power Block at [#AEAOT](#) continues. [#TheMoreYouKnow](#)

[#CSS](#) [#frontend](#) [#design](#) [#development](#) [#UXUI](#)
[#webdesign](#) [#webdevelopment](#) [#conference](#)
[@AnEventApart](#) [@rachelandrew](#)

2:03 PM · Oct 11, 2021



15

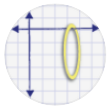


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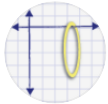
Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

sizing: the spec used to be known CSS intrinsic and extrinsic sizing. now it's just box sizing.

The box model used to be really important. We had to give percentage sizing. Until recently we had to take into account margins and padding and such. We had to do a lot of work
[#aeaot](#)



Anne Gibson

@perpendicularme

Everything in CSS is a box. A block level box expands to fill the inline directions and it grows to the height of its content in the block direction.

[#aeaot](#)

2:06 PM · Oct 11, 2021

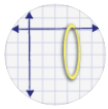


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Replying to @perpendicularme

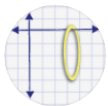
A box has content and that's the content box.

Padding goes around the content box. The border is outside the padding.

The margin is outside the box.

The width of a box is the content box plus the padding and the border.

This is annoying. [#aeaot](#)



Anne Gibson

@perpendicularme

If you want your specified box to be the content box, padding, and the border, set the box-sizing to border-box. [Math is so much easier for me this way.]

We don't typically take control of sizing the way we used to though. [#aeaot](#)

2:07 PM · Oct 11, 2021

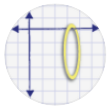


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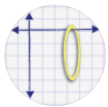


Replying to @perpendicularme

With grid and flex we hand sizing control over to the browser. it does it based on the minimum and maximum size of the content.

Some things have a fixed size, but text doesn't.

min-content and max-content keywords handle that. [#aeaot](#)



Anne Gibson

@perpendicularme

any content-based sizing is worked out based on min and max content sizes. This is really clear in flexbox. the items go to max-content size by default.

if we set flex-auto on those items, they stretch. if the content's the same they may look the same [#aeaot](#)

2:09 PM · Oct 11, 2021

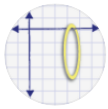


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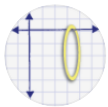


Replying to @perpendicularme

if one thing is big, the browser will give it more space.

if you don't want flexbox to size by the content, then you can set the flex: 1 which sets everything to an equal size without worrying about the content size.

Flex-basis is confusing to a lot of people [#aeaot](#)



Anne Gibson

@perpendicularme

in grid, three tracks set to auto, the smaller items have space. grid starts at min-content and adds space which is the opposite of how flex works. All the sizing is in the spec for all of us to read.

[#aeaot](#)

2:11 PM · Oct 11, 2021

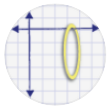


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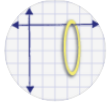


Anne Gibson @perpendicularme · Oct 11, 2021



Replying to @perpendicularme

Do not be afraid to read the specifications. They're more readable than you might think. The stuff toward the top is more useful for web developers. Understand why something has a specific behavior by reading the spec. [#aeaot](#)



Anne Gibson

@perpendicularme

Th MDN property pages are very much designed to give you the information in the specs in a developer-centric way.

[Designers: knowing these pages can make explaining to a developer how to fix a bug easier.] [#aeaot](#)

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