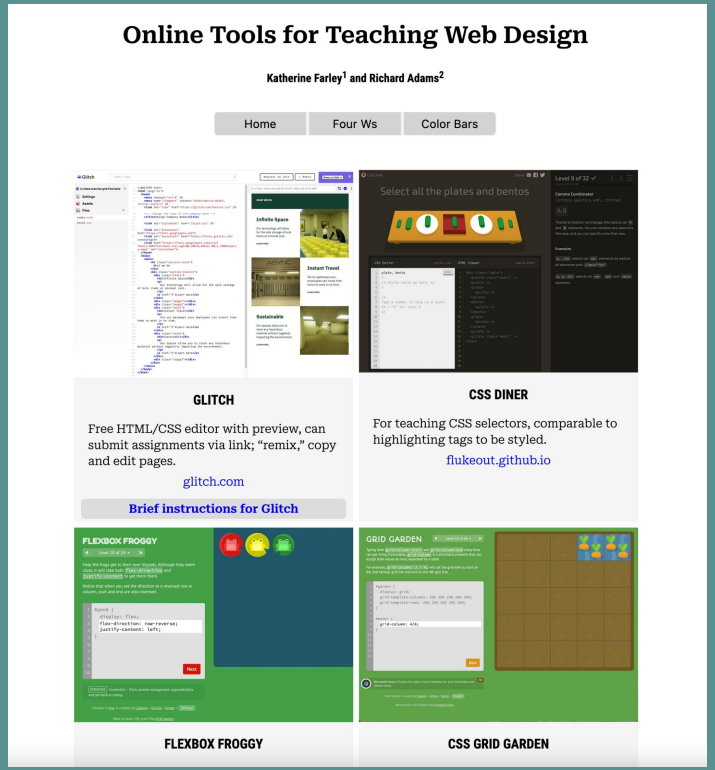
Interactive Tools for Teaching Web Design

Katherine Farley and Richard Adams

rich-adams.info

Web Page for Program



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Interactive Tools

Tool	URL	Description
Glitch	glitch.com	HTML/CSS editor with preview
CSS Diner	flukeout.github.io	32-level game to teach CSS selectors
Flexbox Froggy	flexboxfroggy.com	24-step game to teach CSS flexible box layout
Grid Garden	cssgridgarden.com	28-level game to teach CSS grid layout
Scratch	scratch.mit.edu	Modular game and animation programming interface

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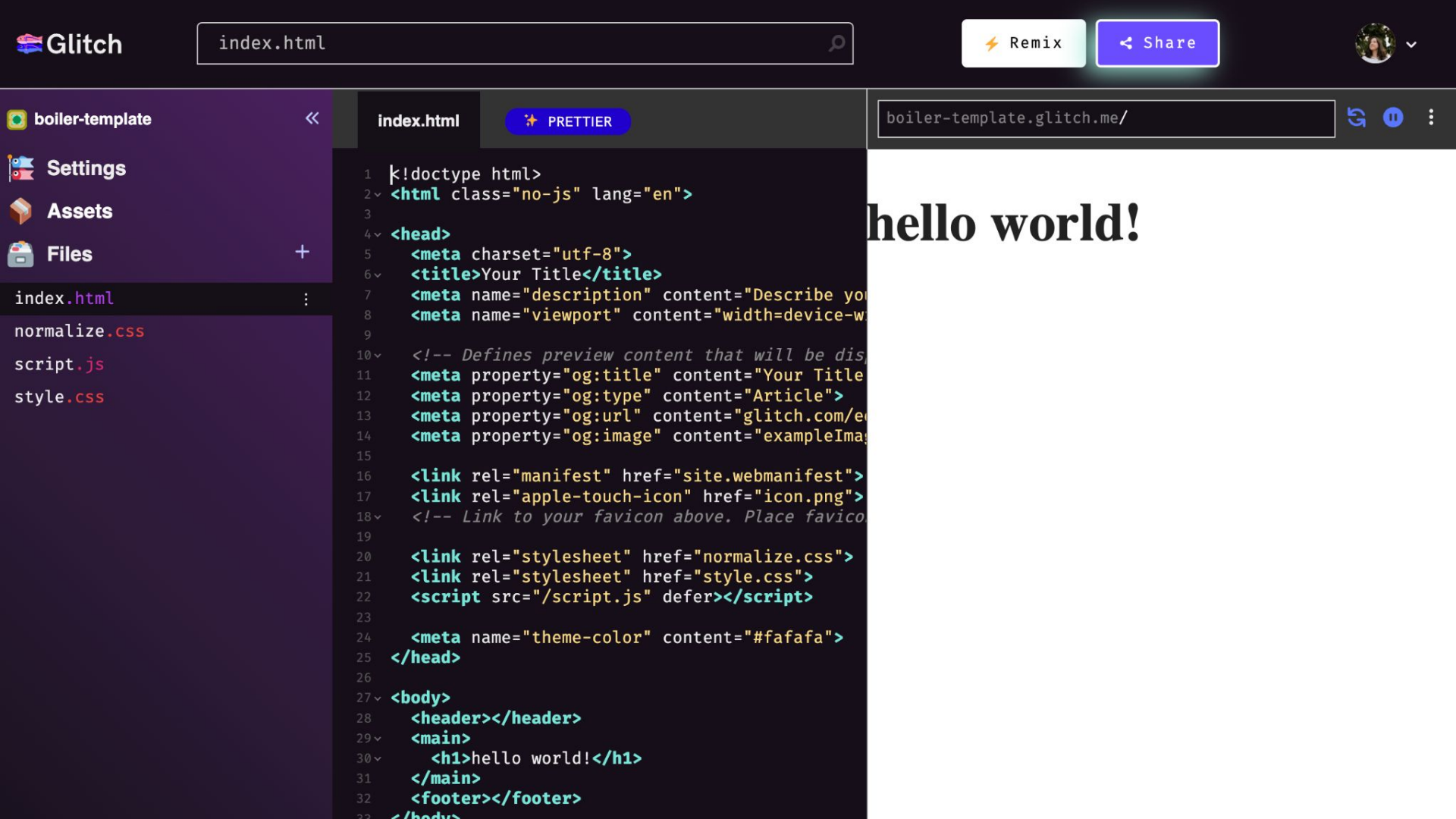
Glitch

Glitch is the friendly place where everyone builds the web. Start a new blog, play with React, or build new worlds with WebXR.


Glitch
index.html
Remix
Share
boiler-template
Settings
Assets
Files
index.html
normalize.css
script.js
style.css
index.html
PRETTIER
boiler-template.glitch.me/
hello world!

Benefits of Glitch

- Free
- Friendly interface
- Share code easily
- Remix code
- Preview pane and window

“The website we used Glitch.com was super useful in having a quick and accessible coding program to work in.”

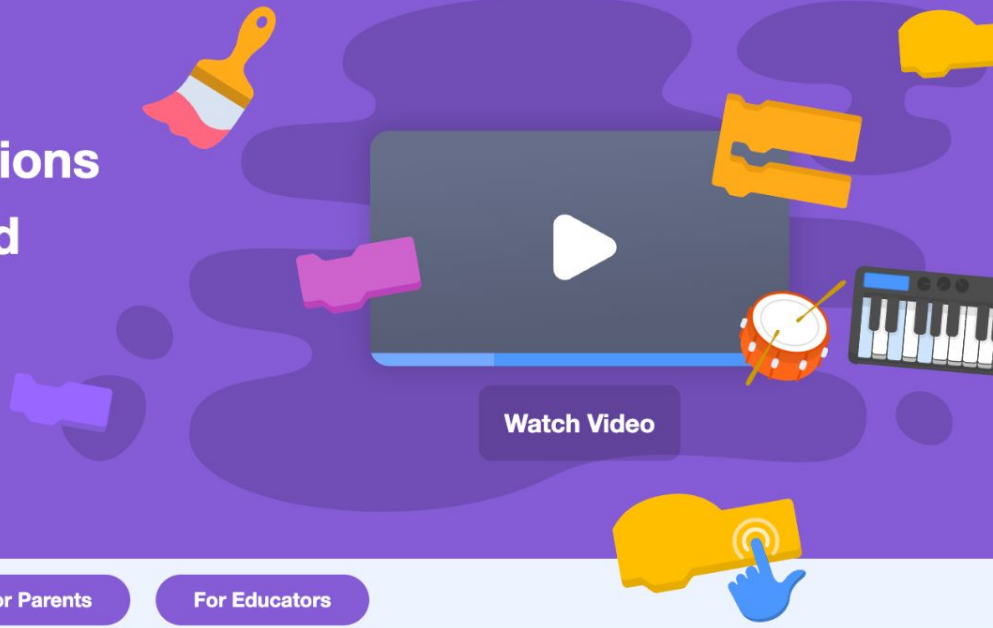
“I like that glitch is a free resource because it was very easy to use and learn from.”

Scratch

Scratch is the world's largest free coding community for kids. Your support makes a difference. Donate

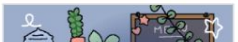
Create stories, games, and animations
Share with others around the world

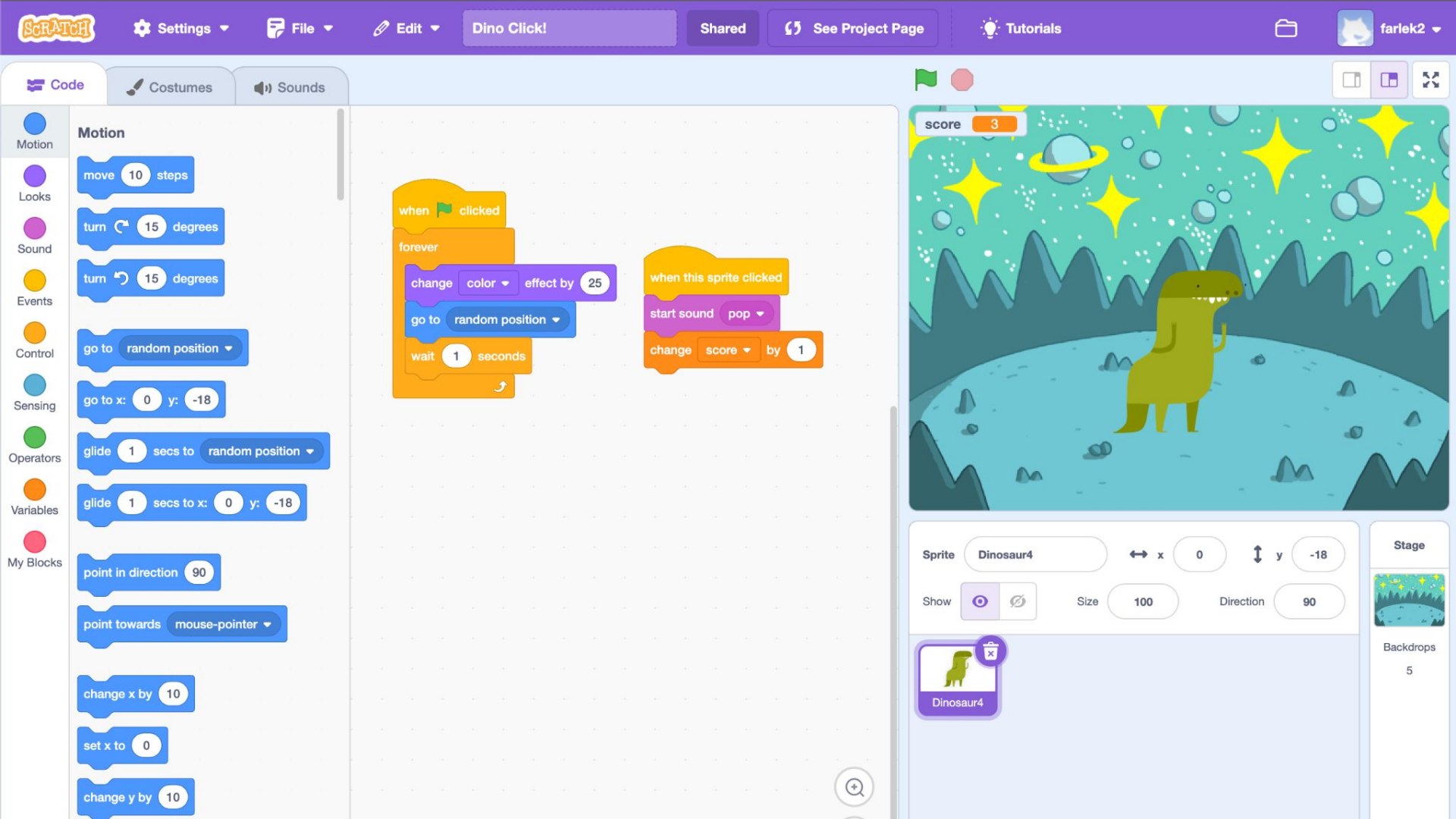
Start Creating Join

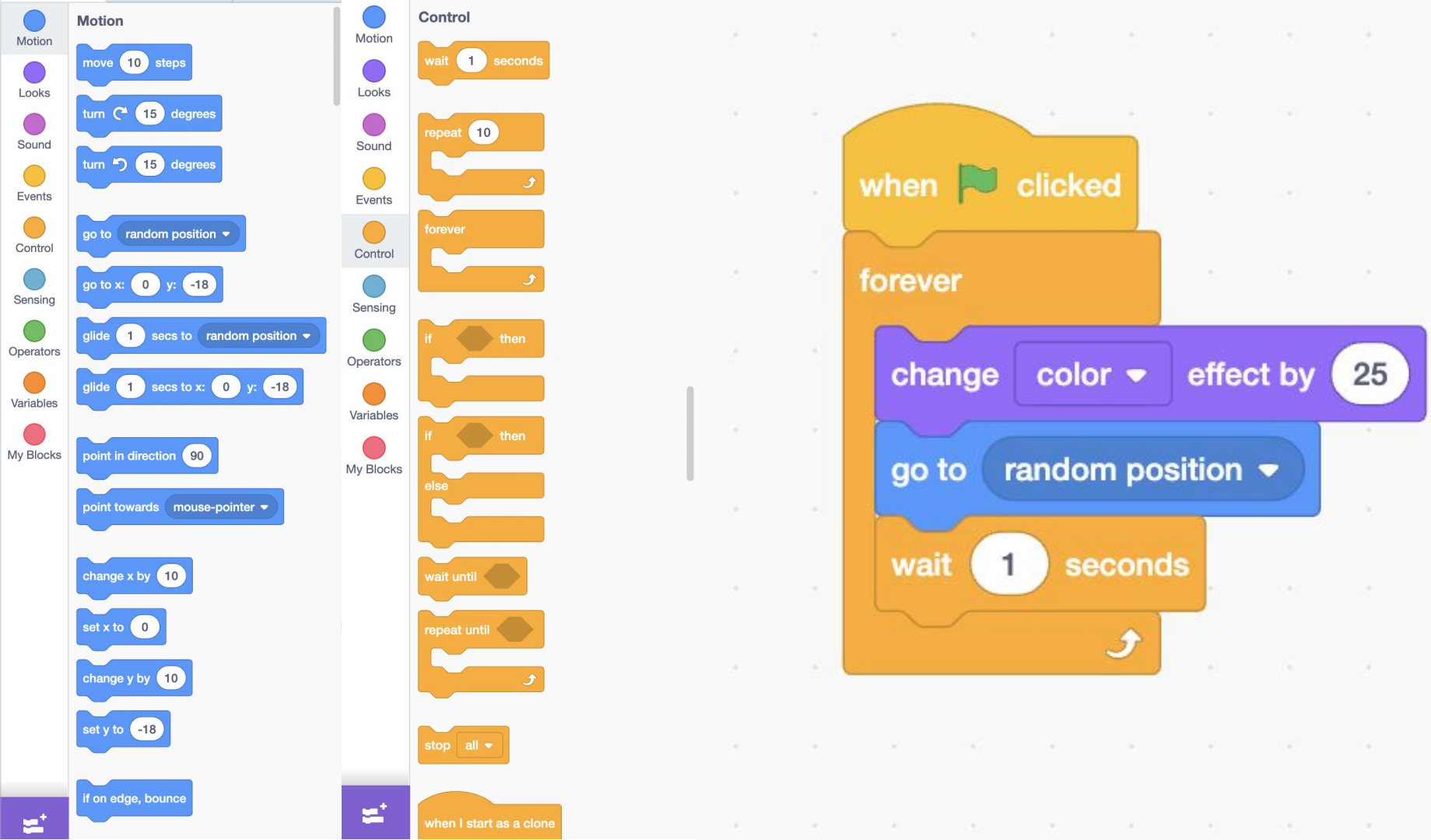


About Scratch For Parents For Educators

Featured Projects




Settings
File
Edit
Dino Click!
Shared
See Project Page
Tutorials
farlek2
Code
Costumes
Sounds
Motion
Looks
Sound
Events
Control
Sensing
Operators
Variables
My Blocks
Motion
move 10 steps
turn 15 degrees
turn 15 degrees
go to random position
go to x: 0 y: -18
glide 1 secs to random position
glide 1 secs to x: 0 y: -18
point in direction 90
point towards mouse-pointer
change x by 10
set x to 0
change y by 10
when clicked
forever
change color effect by 25
go to random position
wait 1 seconds
when this sprite clicked
start sound pop
change score by 1
score 3
Sprite Dinosaur4
x 0
y -18
Show
Size 100
Direction 90
Dinosaur4
Stage
Backdrops 5


Motion
Looks
Sound
Events
Control
Sensing
Operators
Variables
My Blocks
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move 10 steps
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go to random position
go to x: 0 y: -18
glide 1 secs to random position
glide 1 secs to x: 0 y: -18
point in direction 90
point towards mouse-pointer
change x by 10
set x to 0
change y by 10
set y to -18
if on edge, bounce
Motion
Looks
Sound
Events
Control
Sensing
Operators
Variables
My Blocks
Control
wait 1 seconds
repeat 10
forever
if then
if then
else
wait until
repeat until
stop all
when I start as a clone
when clicked
forever
change color effect by 25
go to random position
wait 1 seconds

Snail Maker

Use the arrows to customize your snuggly snail!

Body Color

Shell Color

Face

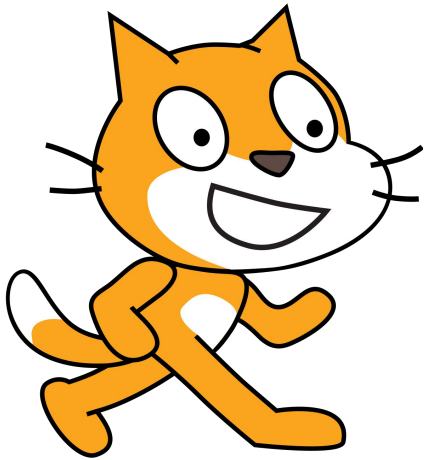
Accessories

DVD
Hit the corners

cpuHealth
71
CE
CE
GR
pcHealth
47

Benefits of Scratch

- Intro computational thinking
- Problem solving skills
- Beginner friendly
- Collaborative
- Robust documentation



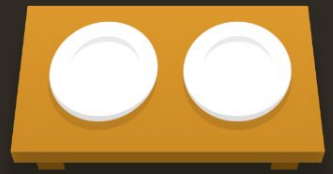
CSS Diner

CSS Diner

Share

Select the plates

Help, I'm stuck!



CSS Editor style.css

```
1  Type in a CSS selector
2  {
3  /* Styles would go here. */
4  }
5
6  /*
7  Type a number to skip to a level.
8  Ex → "5" for level 5
9  */
10
11
12
13
14
15
16
17
18
```

enter

HTML Viewer table.html

```
1  <div class="table">
2    <plate />
3    <plate />
4  </div>
5
6
7
8
9
10
11
12
13
14
15
16
17
18
```

Level 1 of 32 ✓

Type Selector

Select elements by their type

A

Selects all elements of type `A`. Type refers to the type of tag, so `<div>`, `<p>` and `<ul>` are all different element types.

Examples

`div` selects all `<div>` elements.

`p` selects all `<p>` elements.

created by @flukeout

Level 1 of 32 ✓

Type Selector

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Selects all elements of type `A`. Type refers to the type of tag, so `<div>`, `<p>` and `<ul>` are all different element types.

Examples

`div` selects all `<div>` elements.

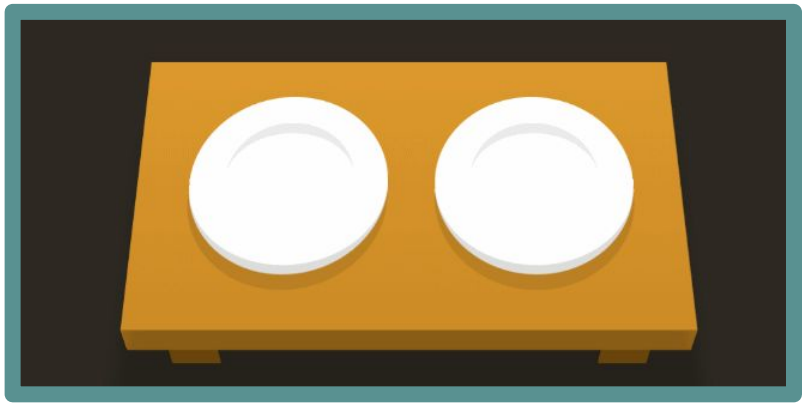
`p` selects all `<p>` elements.

Choose a level

- ✓ 1 A
- ✓ 2 A
- ✓ 3 #id
- ✓ 4 A B
- ✓ 5 #id A
- ✓ 6 .classname
- ✓ 7 A.className
- ✓ 8 Put your back into it!
- ✓ 9 A, B
- ✓ 10 *
- ✓ 11 A *
- ✓ 12 A + B
- ✓ 13 A ~ B
- ✓ 14 A > B

Benefits of CSS Diner

- Easy onramp to new concept
- Visualizes selectors
- Minimize frustration
- Engaging



Flexbox Froggy

FLEXBOX FROGGY

Level 12 of 24

Help the frogs find their lilypads using `flex-direction` and `justify-content`.

```
#pond {
  display: flex;
  flex-direction: column-reverse;
  justify-content: space-between;
}
```

Next

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FLEXBOX FROGGY

Level 1 of 24

Welcome to Flexbox Froggy, a game where you help Froggy and friends by writing CSS code! Guide this frog to the lilypad on the right by using the `justify-content` property, which aligns items horizontally and accepts the following values:

- `flex-start`: Items align to the left side of the container.
- `flex-end`: Items align to the right side of the container.
- `center`: Items align at the center of the container.
- `space-between`: Items display with equal spacing between them.
- `space-around`: Items display with equal spacing around them.

For example, `justify-content: flex-end;` will move the frog to the right.

```
#pond {
  display: flex;
  justify-content: flex-end;
}
```

Next

Level 24 of 24

prop

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

Reset

Benefits of Flexbox Froggy

- Friendly intro to flex
- Visualizes flexbox properties
- Minimize frustration
- Rewarding

Grid Garden

GRID GARDEN

English | Level 1 of 28

Welcome to Grid Garden, where you write CSS code to grow your carrot garden! Water only the areas that have carrots by using the `grid-column-start` property.

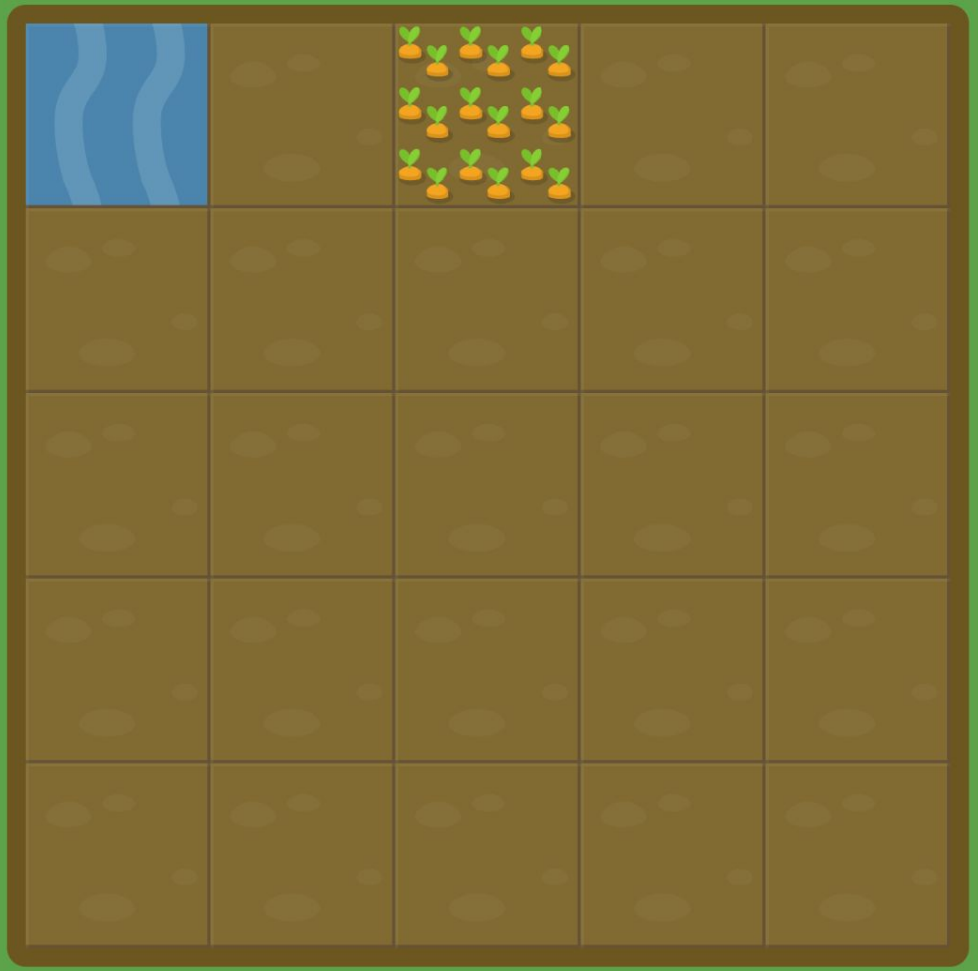
For example, `grid-column-start: 3;` will water the area starting at the 3rd vertical grid line, which is another way of saying the 3rd vertical border from the left in the grid.

```
#garden {
  display: grid;
  grid-template-columns: 20% 20% 20% 20% 20%;
  grid-template-rows: 20% 20% 20% 20% 20%;
}

#water {

}
```

Next



GRID GARDEN

English | Level 1 of 28

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```
#garden {
  display: grid;
  grid-template-columns: 20% 20% 20% 20% 20%;
  grid-template-rows: 20% 20% 20% 20% 20%;
}

#water {

}

```

Level 28 of 28

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

Reset

Benefits of Grid Garden

- Friendly intro to grid
- Visualizes grid properties
- Minimize frustration
- Rewarding

Questions?

Credits

Scratch: Founded by Mitchel Resnick and David Siegel

Glitch: Anil Dash, CEO

CSS Diner: Created by Luke Pacholski

Flexbox Froggy: Created by Thomas Park

Grid Garden: Created by Thomas Park

Thank you

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