Using Every, a non-blocking time thing. Alan Grover.

1. Time

Or, walking and chewing gum at the same time.

“sequential” vs “asynchronous”

Wait. Periodic.

“sequential” vs “asynchronous”

time.sleep(), delay()

"Blocking" means waiting, and stopping everything.

Non-blocking. Guess...

waiting without stopping everything.

2. Standard blink, twice

Blocking

Well...

What do we know about time.sleep()?

checkout out “visual programming”. NodeRed, Grasshopper, more….

3. How to blink

with Every, "is it time?"

“Non-blocking”, “polling”, “asynchronous”

```
pixel_one_delay = Every(0.5) # every 1/2 second, ...
pixel_two_delay = Every(1/3) # every 1/3 second, ...
```

each "if" is independent

4. Starting and finishing

Every is repeating, periodic.

heartbeat

timer is non-repeating. Duration. “until”.

Setup. .start(). if.

long_on, short_on

tap

5. Arbitrary Complexity: more stuff plus gravity

>>>

(control-c)

```
from adafruit_circuitplayground import cp
```

```
cp.acceleration.x
```

up-arrow

```
cp.<tab>
```

```
cp.acceleration.<tab>
```

each "if" is independent

6. Imagination and composition

There is no code here.

break it down

“cognitive load”

one action-reaction thing: potentiometer-servo

add another: tilt-color

each "if" is independent

python is slow vs "arduino" (c++)

circuitplayground has very little brain: "circuitpython" (cf. 70 lines!)

buttons, slide-switch, tilt, tap, shake, microphone, light, touch

https://learn.adafruit.com/circuitpython-made-easy-on-circuit-playground-express