

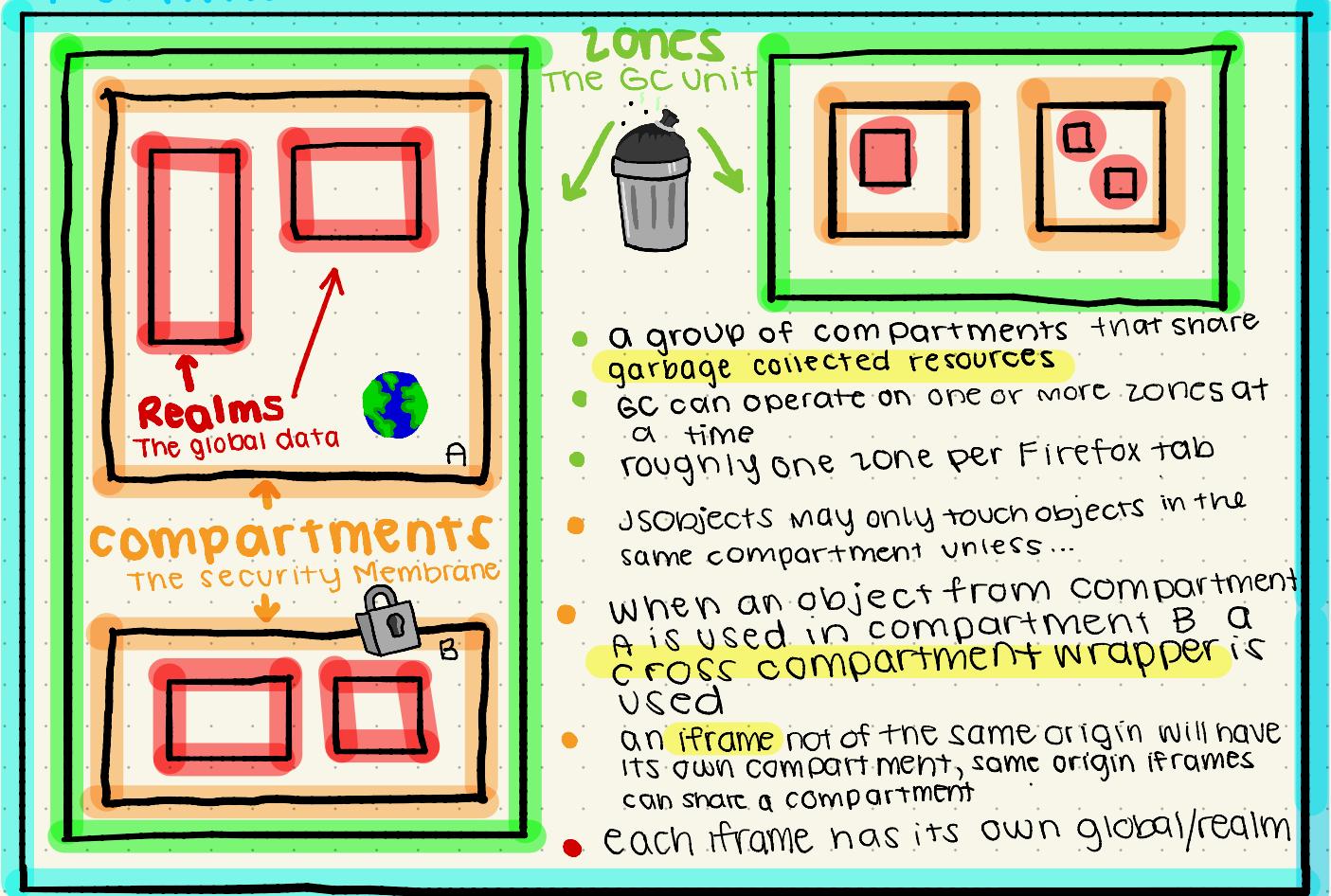
# SpiderMonkey Runtime Data Structures

## JSContext The Thread

- represents a thread
- must be one JSContext for each thread running JS/WASM

- helper threads can have their own JSContext
- does exception handling & error handling
- a context can be used for running many different scripts
  - through the runtime a context can run scripts
  - each runtime belongs to ONE context
  - contains all state for a thread running JS, i.e. heap
- helper threads don't have their own runtimes

Runtime



**helper threads** - helper threads do things like GC, parsing, background compilation, source compression, etc. but cannot run JS scripts

**garbage collected resources** - any allocated JS objects, compartments, strings, etc

**Cross compartment wrappers** - a type of proxy that is part of Firefox's security model. The only way to communicate between compartments.

**iframe** - an HTML element that can embed an external webpage within another webpage. (youtube, maps, ads, etc.)