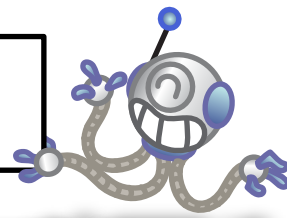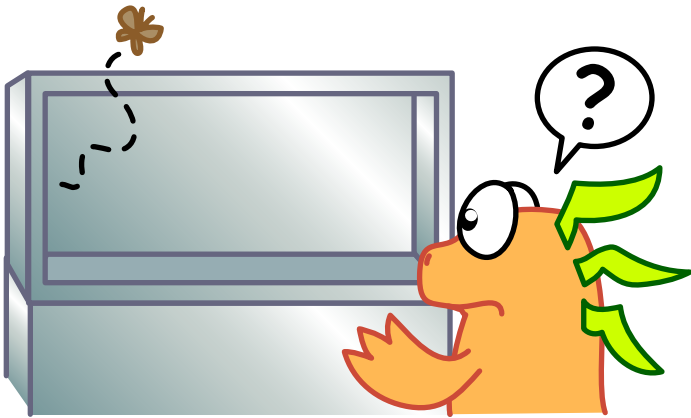# Cache Misses
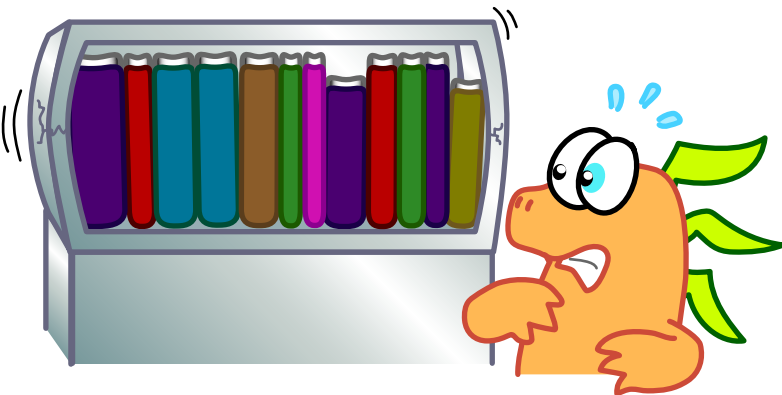### When you just can't find what you're looking for...

Sometimes, the cache doesn't have the memory block the computer's looking for. When this happens, it's called a cache miss. There are three causes of cache misses. Just remember the three C's:
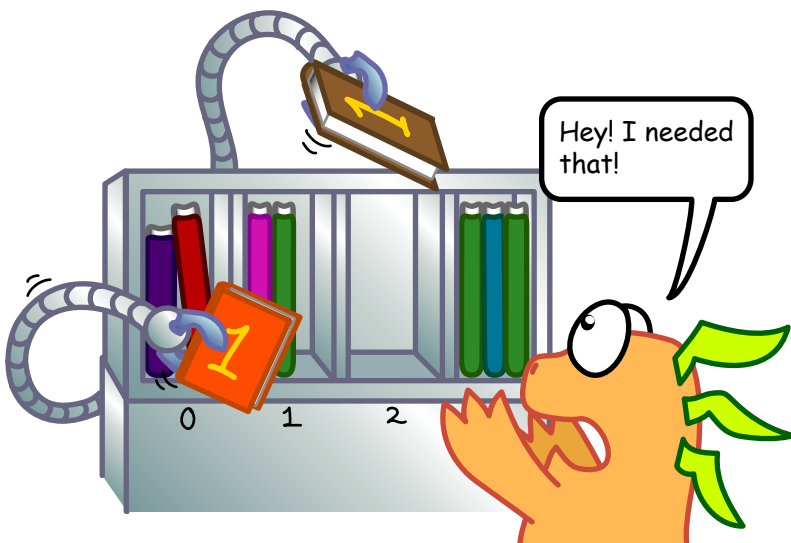
Compulsory

Compulsory misses happen when a block is referenced for the first time. The computer can't get a block that doesn't exist yet!

Capacity

The block is not in the cache because there is no space in the cache for it. Caches are of finite size, after all.

Conflict

> Hey! I needed that!

These types of misses happen only in direct-mapped and set-associative caches. Multiple blocks can be mapped to a set, forcing evictions when the set is full.

0 1 2