Digits, bytes and hexadecimal recap

Why bytes are important

A bit is a **b**inary dig**it**, the smallest increment of data on a computer. It represents only 2 values - either a 0 or 1 that corresponds to the electrical values of off or on, respectively.
Because bits are so small, you hardly ever work with information one bit at a time.

So, what can we do?

Bits are usually assembled into a group of eight to form a **byte**. A byte is very useful for computer programmers. Why? For lots of reasons. One reason is that a byte contains enough information to store a single ASCII character, like "m". Computer storage and memory is often measured in megabytes (MB) and gigabytes (GB).
The list goes on ... but for our purposes, a byte is most important because each hexadecimal color (Red, Blue or Green) is represented by a byte.

Hexadecimal colors

Hexadecimal color values are supported in all browsers.

And the syntax is pretty straightforward. We specify a hexadecimal color as #RRGGBB. We know that each hexadecimal color (RR, GG and BB) is defined by 8 bytes. Remember, each byte can represent 256 values.

This means that the hexadecimal color system can take on 256 x 256 x 256 = 16,777,216 values.

Pretty cool right.