Computer Science 7

Notes

1. Binary: way to store data in a computer consisting of 1’s and 0’s
2. Bit: on or off. A bit is a 1 or a 0.
3. Zero (0): Off
4. One (1): On
5. Pixel: Short for Picture Element. Smallest piece of information making up a picture.
6. Example: 12\*28=
	1. WWBBBWBBW
	2. 57-57-42-42
	3. 111001-111001-101010-101010
	4. 00111001- 00101010
7. Byte: series of 8 bits.
8. Unicode: way to encode text so that everyone uses the same thing
9. Transistor: switch
	1. Smallest: 4 atoms wide. 1500 on a strand of hair
	2. 4 billion transistors on a chip
10. 
11. Resolution: hwo many pixels being shown on the screen. More pixels, tend to be sharper (clearer image)
	1. 2160 x 3840: Today
12. Density: how many pixels per screen size
13. RGB: Red, Green, Blue
	1. 0-255
		1. 0: Dark
		2. 255: Very Bright
	2. Turquoise:
		1. 64, 224, 208
	3. Changing colors
		1. Take a pixel and make a function
		2. Example: Subtract 50 from each of RGB
		3. 64, 224, 208 🡪 14, 174, 158
	4. 24 binary digits or 3 bytes to represent 1 pixel
		1. 001000000111000001101000
		2. BYTE BYTE BYTE
14. Hexadecimal
	1. 40-E0-D0
	2. Much shorter to send than 24 bits
15. Picture Formats
	1. GIF, PNG, JPEG
16. It’s not just COOL: it’s a way to discover what’s going on in your world