Objective 103.01

Understand concepts used to create digital graphics.

Part Three :
Concepts of Digital Graphics

Course Weight : 15%

ExplorNet CareerTech
from The Centers for Quality Teaching and Learning

Digital Graphics

Any image or design created or edited by a computer

- ✓ Drawings
- ✓ Logos
- ✓ Photos
- ✓ Advertising
- ✓ Buttons
- ✓ Icons
- ✓ Diagrams
- ✓ Charts

Concepts of Digital Graphics

Bitmap Graphics vs. Vector Graphics

- ✓ Use square **pixels** arranged in a grid that have assigned colors
- ✓ **Lose clarity** when viewed up close or zoomed in
- ✓ Also referred to as **Raster Graphics**

- ✓ Use **mathematical formulas** to define lines, points, curves, and other attributes.
- ✓ **Do not lose clarity** when viewed up close or zoomed in
- ✓ Best type of graphic for printing in large scale

Concepts of Digital Graphics

Resolution

- ✓ Describes the clarity of Bitmap Graphics
- ✓ Determined and defined by the number of **Pixels Per Inch (PPI)**

LOW RESOLUTION

- blurry in appearance
- relatively small file size

HIGH RESOLUTION

- very clear in appearance
- relatively large file size

Color Modes of Digital Graphics

- Black & White
  uses only true black and true white
- Grayscale
  uses true black, true white, and all shades of gray in between
- True Color
  all possible color combinations
- RGB (Red, Green, Blue)
  optimized for viewing on a screen
- CYMK (Cyan, Yellow, Magenta, Black)
  optimized for printing purposes

Color Depth

- ✓ The number of distinct colors a graphic is capable of displaying
- ✓ Related to color mode

1-Bit : Black & White

8-Bit : Indexed Color (256 colors)

24-Bit : True Color (16.7 million colors)