Century 21 Jr.
Input Technologies & Computer Applications

Ch. 7 – Digital Imaging, Scanning, and Photography

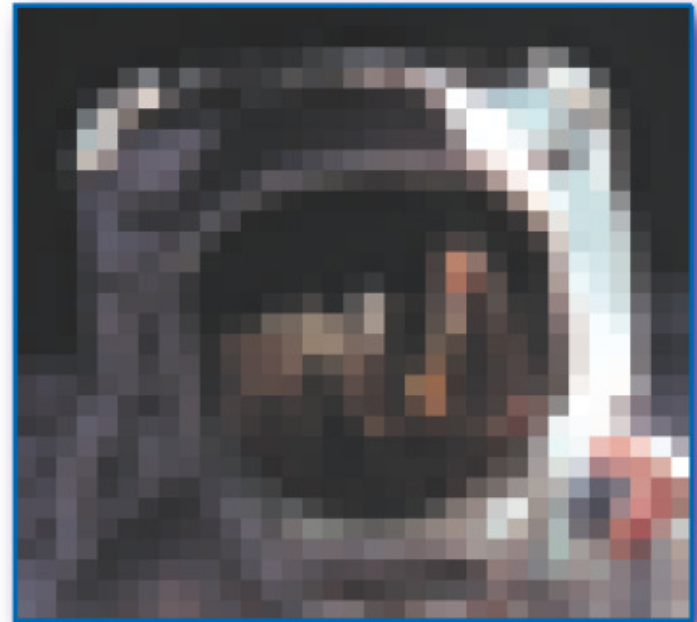# Image Resolution

- More pixels = higher resolution

Images courtesy of NASA.

High-resolution Image

Low-resolution Image

Common Graphic File Formats

JPEG (.jpg)	Supports millions of colors. Files can be compressed. Variety of resolutions available.
GIF (.gif)	Popular format for internet graphics. Small compressed files. Acceptable for line art and simple animations.
TIFF (.tif)	High resolution; commonly used in desktop and print publishing.
BMP (.bmp)	Bitmap format created by Microsoft. Low resolution.
PSD (.psd)	Default standard supported by *Adobe Photoshop.* Will preserve special Photoshop layers and features.
PNG (.png)	Popular format for Internet graphics. Supports 32-bit color and transparency.

Best for internet images

Easy to manipulate in *Microsoft Office* applications

Best for printed documents

Image Quality

- Brightness
  - How light or dark image pixels are
- Contrast
  - Difference between light and dark pixels
- Color
  - Hue
  - Saturation
    - Purity of a color or hue
  - Tint
    - Changes the qualities of a hue

Adjusting Images

- Auto adjust
  - Let Windows Photo Gallery automatically improve the image
- Adjust exposure
  - Control brightness and contrast
- Adjust color
  - Change hue and saturation
- Crop picture
- Fix Redeye

Digital Images

- More megapixels allows you to
  - Enlarge image without losing quality
  - Zoom in for more detail
- Optical zoom
  - Physically adjusts lenses to zoom
  - Same high quality image
- Digital zoom
  - Lesser image quality

Image File Size

- Use fewer megapixels for images on web pages or sent in email

- Use max megapixels for high-quality printing of large images
  - Increased file size means fewer photos can be stored in camera before downloading

Memory Card Capacity

	3 megapixels	5 megapixels	8 megapixels
128 MB memory card	~108 photos	~52 photos	~10 photos
256 MB memory card	~218 photos	~104 photos	~20 photos
512 MB memory card	~436 photos	~209 photos	~40 photos
1 GB memory card	~874 photos	~419 photos	~80 photos

Review Question

1. What does the term *hue* describe about an image?

    a. The difference between light and dark pixels

    b. The purity of a color

    c. The qualities of a color

    d. Whether a color is red, green, blue, etc.

Read the question and decide which answer you think is correct. Click the mouse to see the correct answer.

ANSWER

1. What does the term *hue* describe about an image?

   a. The difference between light and dark pixels

   b. The purity of a color

   c. The qualities of a color

   d. Whether a color is red, green, blue, etc.

Review Question

2. Which of the following describes resolution?

    a. Digitizing

    b. Orientation

    c. Pixels per inch

    d. Skewing

Read the question and decide which answer you think is correct. Click the mouse to see the correct answer.

ANSWER

2. Which of the following describes resolution?

   a. Pixels per inch

   b. Digitizing

   c. Orientation

   d. Skewing

Review Question

3. Images with low megapixels

   a. Take up more memory

   b. Decrease file size

   c. Improve redeye

   d. Have better resolution

Read the question and decide which answer you think is correct. Click the mouse to see the correct answer.

ANSWER

3. Images with low megapixels
   a. Take up more memory
   b. Decrease file size
   c. Improve redeye
   d. Have better resolution

Review Question

4. If the same image is saved in each format below, which one is likely to be the largest file?

   a. JPG

   b. TIFF

   c. BMP

   d. PNG

Read the question and decide which answer you think is correct. Click the mouse to see the correct answer.

ANSWER

4. If the same image is saved in each format below, which one is likely to be the largest file?

   a. JPG

   b. TIFF

   c. BMP

   d. PNG

Review Question

5. How many megapixels are suitable for an 8 x 10 photo?

    a. 1-2

    b. 3-4

    c. 5-6

    d. 8-10

Read the question and decide which answer you think is correct. Click the mouse to see the correct answer.

ANSWER

5. How many megapixels are suitable for an 8 x 10 photo?

    a. 1-2

    b. 3-4

    c. 5-6

    d. 8-10