Our website!
http://techgirls.cs.vt.edu/

A Quick Recap
• Learning the basics:
  – Classes
  – Objects
  – Methods
  – Fields and variables
  – If statements, loops

More Image Fun!
Today:
Joining, Scaling,
Cropping, and Alpha Blending

Joining
Vertically

Scaling
Red, Green and Blue Light

- White light is a combination of red, green, and blue
  - Full intensity red, green, and blue combined
- Black is the absence of all light
  - No red, green or blue light
- All other colors are combinations
  - Of red, green, and blue
  - Of different intensities

So a pixel color is...

- A triple: (R, G, B)
- A red value (0-255)
- A green value (0-255)
- A blue value (0-255)

But there is more...

- In reality: (R, G, B, A)
- Also an “alpha” value (0-255)
- Represents “transparency”
- 0 => fully transparent
- 255 => fully opaque
For two colors C1, C2
- Let C1 be the "top" image, and C2 be the "bottom"
- A1 == alpha of "top" image
- Blended color is:
  \[ C1 \times \frac{A1}{255} + C2 \times \frac{255 - A1}{255} \]

Activities
- Dream up your own collage
- Sketch it on paper
- Create your own Java class and write your own version of collage!
- Use your own images!